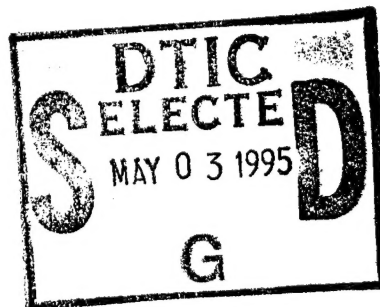


NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS



**USE OF THE OVER AND ABOVE WORK CLAUSE
IN SHIP REPAIR CONTRACTS**

by

Duane J. Schatz

December, 1994

Principal Advisor:

Rebecca J. Adams

Approved for public release; distribution is unlimited.

DTIC QUALITY INSPECTED 8

19950501 072

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE December, 1994	3. REPORT TYPE Master's Thesis		
4. TITLE AND SUBTITLE USE OF THE OVER AND ABOVE WORK CLAUSE IN SHIP REPAIR CONTRACTS			5. FUNDING NUMBERS	
6. AUTHOR(S) Duane J. Schatz				
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the US Government.				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) The area of research for this thesis is the acquisition of "over and above work" in ship repair contracts. The objective of this research is to explore the use of the Defense Federal Acquisition Regulation Supplement (DFARS) "over and above work" provisions in ship repair contracts. The thesis addresses how the DFARS "over and above work" provisions should be incorporated into ship repair contracts. Particular attention is given to the Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP) San Diego, CA incorporation of the DFARS "over and above work" provisions as a local test in the solicitation and contract for the USS ELLIOT (DD-967) February 1994 to May 1994 Selected Restricted Availability (SRA).				
14. SUBJECT TERMS Over and above work			16. PRICE CODE	
			15. NUMBER OF PAGES 84	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	
NSN 7540-01-280-5500			Standard Form 298 (Rev. 2-89)	

Approved for public release; distribution is unlimited.

USE OF THE OVER AND ABOVE WORK CLAUSE IN SHIP REPAIR CONTRACTS

by

Duane J. Schatz
Lieutenant, United States Navy
B.B.A., University of North Dakota, 1984

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December, 1994

Author:

Duane J. Schatz
Duane J. Schatz

Approved by:

Rebecca J. Adams
Rebecca J. Adams, Principal Advisor

Mark W. Stone
Mark W. Stone, Associate Advisor

David R. Whipple
David R. Whipple, Chairman,
Department of Systems Management

Accession For	
NTIS	CRA&I <input checked="" type="checkbox"/>
DTIC	TAB <input type="checkbox"/>
Unannounced <input type="checkbox"/>	
Justification _____	
By _____	
Distribution / _____	
Availability Codes	
Dist	Avail and/or Special
A-1	

DTIC QUALITY INSPECTED 8

ABSTRACT

The area of research for this thesis is the acquisition of "over and above work" in ship repair contracts. The objective of this research is to explore the use of the Defense Federal Acquisition Regulation Supplement (DFARS) "over and above work" provisions in ship repair contracts. The thesis addresses how the DFARS "over and above work" provisions should be incorporated into ship repair contracts. Particular attention is given to the Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP) San Diego, CA incorporation of the DFARS "over and above work" provisions as a local test in the solicitation and contract for the USS ELLIOT (DD-967) February 1994 to May 1994 Selected Restricted Availability (SRA).

TABLE OF CONTENTS

I. INTRODUCTION	1
A. OBJECTIVE OF RESEARCH.....	1
B. RESEARCH QUESTIONS.....	1
C. SCOPE, LIMITATIONS AND ASSUMPTIONS OF THESIS RESEARCH....	2
D. METHODOLOGY.....	2
E. DEFINITIONS AND ACRONYMS.....	3
F. ORGANIZATION OF STUDY.....	3
II. BACKGROUND.....	5
A. INTRODUCTION.....	5
B. "OVER AND ABOVE WORK"	5
C. CURRENT PRACTICES.....	8
D. SUPSHIP SAN DIEGO AND "OVER AND ABOVE WORK"	12
E. DODIG AUDIT OF CONTROL OF "OVER AND ABOVE WORK"	15
F. SUMMARY.....	16
III. EXTENT OF "OVER AND ABOVE WORK"	17
A. INTRODUCTION.....	17
B. GAO REPORTS ON COST GROWTH AND SCHEDULE OVERRUNS AT SHIPYARDS.....	17
C. SUPSHIP SAN DIEGO FY 1985 TO FY 1994 GROWTH WORK DATA	21
D. EXTENT OF "OVER AND ABOVE WORK" AT SELECTED SUPSHIP OFFICES.....	27
E. SUMMARY	28
IV. A LOCAL TEST INCORPORATION OF THE "OVER AND ABOVE WORK" PROVISIONS IN A SHIP REPAIR CONTRACT.....	29
A. INTRODUCTION.....	29
B. ELLIOT SRA CONTRACT "OVER AND ABOVE WORK" PROVISIONS.	29
C. INTERNAL SUPSHIP SAN DIEGO "OVER AND ABOVE WORK" PROCEDURES.....	32

D. ANALYSIS OF THE ELLIOT SRA LOCAL TEST.....	34
E. ANALYSIS OF THE "OVER AND ABOVE WORK" CONCEPT AND THE ISSUE OF SHIP REPAIR CONTRACTORS RECOVERING LOSSES THROUGH CONTRACT MODIFICATIONS	39
F. SUMMARY.....	43
V. CONCLUSIONS AND RECOMMENDATIONS.....	45
A. INTRODUCTION.....	45
B. CONCLUSIONS.....	45
C. RECOMMENDATIONS	46
D. ANSWERS TO THE RESEARCH QUESTIONS.....	47
E. AREAS FOR FURTHER RESEARCH.....	49
F. SUMMARY.....	50
APPENDIX A. ACRONYMS	51
APPENDIX B. DFARS SUBPART 217.77--OVER AND ABOVE WORK.....	53
APPENDIX C. DFARS 252.217-7028 OVER AND ABOVE WORK.....	55
APPENDIX D. MSC 5252.217-9801 ADDITIONAL REQUIREMENTS (JAN 1991)..	57
APPENDIX E. DFARS 252.217-7003 CHANGES	61
APPENDIX F. SUPSHIP SAN DIEGO FY 1985 TO FY 1994 GOVERNMENT ESTIMATE, CONTRACT AWARD PRICE, FINAL CONTRACT COST, AND GROWTH WORK DATA FOR SELECTED CNO AVAILABILITIES.....	63
APPENDIX G. ELLIOT SRA CONTRACT "OVER AND ABOVE WORK" PROVISIONS	67
APPENDIX H. SUPSHIP SAN DIEGO "OVER AND ABOVE WORK" TEST RESULTS	71
LIST OF REFERENCES.....	73
INITIAL DISTRIBUTION LIST.....	75

I. INTRODUCTION

The area of research for this thesis is the acquisition of "over and above work" in ship repair contracts. The Defense Federal Acquisition Regulation Supplement (DFARS) has made available another tool for the ship repair contract administration toolbox, the "over and above work" concept. It is important that the use of this tool is explored. It is anticipated that this thesis will contribute towards the incorporation of the DFARS "over and above work" provisions into Department of Defense (DOD) ship repair contracts.

A. OBJECTIVE OF RESEARCH

The objective of this research is to explore the use of the DFARS "over and above work" provisions in ship repair contracts. Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP) San Diego, CA incorporated the DFARS "over and above work" provisions as a local test in the solicitation and contract for the USS ELLIOT (DD-967) February 1994 to May 1994 Selected Restricted Availability (SRA). The contract, contract number N62791-94-C-0018 dated 21 January 1994, was awarded to Southwest Marine, Inc. (SWM) in San Diego, CA. This thesis will include an analysis of the test results, lessons learned, and positive and negative feedback from Government and contractor personnel involved with the ELLIOT SRA contract.

B. RESEARCH QUESTIONS

The primary research question is as follows: How should the DFARS "over and above work" provisions be incorporated into ship repair contracts?

The subsidiary research questions are as follows:

1. What is "over and above work?"
2. To what extent is "over and above work" discovered during ship repair contract performance?
3. What are the significant benefits in using the "over and above work" provisions in ship repair contracts?

4. What are the significant problems in using the "over and above work" provisions in ship repair contracts?

5. How is "over and above work" currently being addressed in ship repair contracts?

6. What modifications should be made to the DFARS "over and above work" provisions?

C. SCOPE, LIMITATIONS AND ASSUMPTIONS OF THESIS RESEARCH

The main thrust of this thesis is to investigate the acquisition of "over and above work" in DOD contracts for the performance of maintenance, overhaul and repair of ships. The thesis is an assessment of SUPSHIP San Diego's incorporation of the DFARS "over and above work" provisions in the ELLIOT SRA contract.

The thesis conclusions and recommendations are based on the local test results of the ELLIOT SRA contract, which is the only SUPSHIP San Diego awarded ship repair contract that incorporated the DFARS "over and above work" provisions and that was also completed at the time of this thesis research effort.

An assumption of this thesis is that the reader has a basic understanding of the SUPSHIP ship repair contract administration environment and processes.

D. METHODOLOGY

Information used in the preparation of this thesis was obtained through literature search, available documentation, personal interviews, and survey questionnaires. The literature provided background information on cost growth and schedule overruns of Navy ship overhaul and repair contracts at private and public shipyards. Available documentation provided background information on "over and above work" and identified the chronology of events leading to the current situation regarding "over and above work" at SUPSHIP San Diego. The personal interviews provided feedback from Government and contractor personnel involved with the ELLIOT SRA contract. The

survey questionnaires provided information and comments regarding "over and above work" from contracting personnel at other SUPSHIP offices which administer ship repair contracts.

E. DEFINITIONS AND ACRONYMS

"Over and above work" means work discovered during the course of performing overhaul, maintenance, and repair efforts that is within the general scope of the contract, not covered by the line item(s) for the basic work under the contract, and necessary in order to satisfactorily complete the contract. [Ref. 5:252.217-25 and 26]

"Over and above work" request means a document prepared by the contractor which describes "over and above work" being proposed. [Ref. 5:252.217-26]

Delay and disruption (D & D) costs refer to the costs of contract performance that the contractor incurs as a result of some act or failure to act on the part of the Government. Contractors prepare their bids taking into account a certain number of variables, such as the type of ship, weather, availability of labor, materials, equipment, etc. Costs associated with delay are those costs which result from an extended performance period, resulting in increased overhead and job site costs, extended equipment rentals, standby costs, wage escalation, financing costs, etc. Costs associated with disruption are those costs which result from a disruption of the planned method, timing, and sequence of operations, resulting in a loss of efficiency during contract performance. Disruption costs are likely to be increased labor costs due to inefficiency, additional labor placed on the job to compensate for the inefficiencies, increased costs due to the activation-deactivation of work (set-up/breakdown), etc. [Ref. 1:V-1, V-11, and V-13]

A glossary of acronyms is included in Appendix A.

F. ORGANIZATION OF STUDY

Chapter II will present background information for this thesis and an overview of the "over and above work" concept. Chapter II will also identify how "over and above

work" is currently being addressed in ship repair contracts. Chapter III will present data on the amount and impact of "over and above work" in ship repair contracts. Chapter IV will be an analysis of the test results, lessons learned, and positive and negative feedback from Government and contractor personnel involved with the ELLIOT SRA contract. Chapter IV will also be an analysis of the "over and above work" concept and the issue of ship repair contractors recovering losses through contract modifications. Chapter V will present conclusions, recommendations, and brief answers to the research questions. Chapter V will also identify suggested areas for further research.

II. BACKGROUND

A. INTRODUCTION

The purpose of this chapter is to provide background information for this thesis and an overview of the "over and above work" concept. This chapter also identifies how the Military Sealift Command (MSC) and selected SUPSHIP offices address "over and above work." This chapter identifies the chronology of events leading to the current situation involving "over and above work" at SUPSHIP San Diego. In addition, this chapter identifies the concerns which Naval Sea Systems Command (NAVSEA) 028, the code at NAVSEA which is responsible for overseeing the contracting policies and procedures at all of the SUPSHIP offices throughout the United States, and SUPSHIP San Diego's Office of General Counsel (OGC) have regarding the incorporation of the DFARS "over and above work" provisions into ship repair contracts. Also, this chapter presents the finding of a Department of Defense Inspector General (DODIG) audit of the control of "over and above work" for contract depot maintenance.

B. "OVER AND ABOVE WORK"

The new DFARS Subpart 217.77, "Over and Above Work," which introduces a concept new to the Navy, is provided as Appendix B. "Over and above work," also known as growth work or emergent work, is work discovered during the course of performing overhaul, maintenance, and repair efforts that is within the general scope of the contract, not covered by the line item(s) for the basic work under the contract, and necessary in order to satisfactorily complete the work necessary to make the ship ready for sea. [Ref. 5:252.217-25 and 26]

Contracts for the performance of maintenance, overhaul, modification, and repair of various items (e.g., aircraft, engines, ground support equipment, ships) generally contain "over and above work" requirements. When they do, the Subpart indicates that the Contracting Officer is to establish a separate contract line item for the "over and above work." [Ref. 3:217.77-1]

Scheduled maintenance actions for carrying out general repair and alterations are called regular overhauls. Regular overhauls for the more complex Navy ships, such as submarines and carriers, are generally done in naval shipyards. Overhauls for less complex ships, such as auxiliary and amphibious ships, are routinely done in private shipyards. In the past, the Navy used both fixed-price contracts and cost type contracts to obtain ship maintenance from private shipyards. In May 1985, however, the Chief of Naval Operations (CNO) directed that fixed-price contracting be the primary acquisition strategy for ship overhauls. Under a fixed-price contract, a contractor agrees to perform work for a specific amount. The price is not subject to adjustment on the basis of a contractor's cost experience in performing the contract. A cost type contract provides for payment of allowable incurred costs to the extent prescribed in the contract. [Ref. 9:4]

NAVSEA is responsible for the overhaul and repair of Navy ships. Its Industrial and Facility Management Directorate has management control of the naval shipyards and SUPSHIP offices. The SUPSHIP offices plan and manage the overhaul of Navy ships in private shipyards located in their geographical areas. [Ref. 9:4]

The Navy has moved from regular scheduled overhauls performed every three to four years toward shorter, more frequent, intermittent depot level repairs called SRAs and phased maintenance availabilities. Under the various maintenance strategies, the Navy maintains, repairs, and sometimes makes improvements to modernize ships. Assignment of a ship to a repair activity for this work is called an availability. [Ref. 10:8]

According to Navy officials, identifying all required maintenance on a Navy ship is almost impossible until a ship is dry-docked and cut open, the power plant is shut down, and the ship and equipment are inspected and tested. For example, after dry-docking the USS DIXON (AS-37), the Navy found accelerated deterioration of the hull. Repairing the hull added \$7 million to the contract cost and extended the dry-docking time by sixty days. The Navy and contractors have to modify the contracts to accomplish the additional work that is subsequently identified. Unlike the contract award price that is influenced by competition, the price of contract modifications is negotiated solely with the contractor. [Ref. 10:16]

Even if the ship is not dry-docked during the availability, identifying all required maintenance may not be possible until equipment panels are removed or pieces of equipment are opened and inspected. Examples of equipment that may reveal "over and above work" include diesel engines, turbine generators, and boilers.

"Over and above work" requirements task the contractor to identify needed repairs and recommend corrective action during contract performance. The contractor submits a work request to identify the "over and above work" and, as appropriate, the Government authorizes the contractor to proceed. [Ref. 3:217.77-1]

The "Over and Above Work" Clause at 252.217-7028, which is provided as Appendix C, requires the contractor and the Contracting Officer responsible for administering the contract, the Administrative Contracting Officer (ACO), to negotiate specific procedures for Government administration and contractor performance of "over and above work" requests. If the parties cannot agree upon the procedures, the ACO has the unilateral right to direct the "over and above work" procedures to be followed. These procedures, as a minimum, are to cover the format, content, and submission of work requests by the contractor, the Government review, verification, and authorization of the work, and proposal pricing, submission, negotiation, and definitization. [Ref. 5:252.217-26]

Upon discovery of the need for "over and above work," the contractor is to prepare and furnish to the Government a work request in accordance with the agreed-to procedures. The Government is to then promptly review the work request, verify that the proposed work is required and not covered under the basic contract line item(s), verify that the proposed corrective action is appropriate, and authorize the "over and above work" as necessary. In addition, the contractor is to promptly submit to the Contracting Officer a proposal for the "over and above work." The Government and contractor will then negotiate a settlement for the "over and above work." Failure to agree on the price of "over and above work" is a dispute within the meaning of the contract's Disputes Clause. [Ref. 5:252.217-26]

The Subpart indicates that "over and above work" is considered to be within the scope of the contract. This is significant because, if "over and above work" was not considered to be within the scope of the contract, it would be considered new work. New work, or work outside the scope of the contract, is not supposed to be added to the basic contract without being subject to the normal competitive acquisition process. To the maximum extent practical, "over and above work" is to be negotiated prior to performance of the work. [Ref. 3:217.77-1]

C. CURRENT PRACTICES

The information presented in this section is taken from survey questionnaire responses received from the MSC and selected SUPSHIP offices. Based on the survey questionnaire responses, various methods are used to address "over and above work" in ship repair contracts.

As an alternative to using the DFARS "Over and Above Work" Clause at 252.217-7028, the MSC has approval to use its Additional Requirements Clause, which is provided as Appendix D. The Additional Requirements Clause is designed to estimate actual contractor man-hour requirements for an availability, competitively preprice emergent work, and reduce claims for D & D due to emergent work. The contractor submits, as part of its proposal, a line item price for a block of additional requirements man-hours established by the Government. This line item price is a fully loaded rate that includes general and administrative (G&A) expense, profit, D & D costs, and direct labor costs. The number of additional requirements man-hours established by the Government predicts the level of undefined emergent work and varies with the ship and the availability type. [Ref. 14:5-6]

With the "Over and Above Work" Clause, the contractor initiates the action, while the Government, rather than the contractor, will normally initiate the action with the Additional Requirements Clause. The Additional Requirements Clause requires the contractor to plan for additional work such that it will not cause D & D or acceleration of the original work. The "Over and Above Work" Clause calls for the contractor and

Government to mutually agree to procedures for Government administration and contractor performance of "over and above work." while the Additional Requirements Clause sets forth, in advance of contract performance, the procedures which will be followed. [Ref. 14:3]

The "Over and Above Work" Clause does not define the period of performance or ordering period for the additional work, while the Additional Requirements Clause establishes the amount of additional work that may be ordered and requires that it be performed within the original contract period. This permits the contractor to plan for and preprice D & D costs and to prepare adequate work plans anticipating the additional work. Also, since the additional hours are included in the contractor's proposal, the Contracting Officer is able to evaluate whether the proposed contractor has the necessary manpower capability to perform the work required by the contract. [Ref. 14:3-4]

Another difference in the clauses is that the Additional Requirements Clause describes the labor mix (i.e., categories and definitions of direct production hours are provided) and the Government gets a fixed labor rate for the additional work prior to award which can be used in the evaluation of offers. The Additional Requirements Clause also gives the Government the option of having additional work performed by the Government or by a third party in those cases where the contractor and Government cannot agree on a fair and reasonable price for the additional work. [Ref. 14:4]

Three SUPSHIP offices responded that they utilize the Changes Clause at 252.217-7003, which is provided as Appendix E, to get "over and above work" negotiated into the contract as a growth item. The Changes Clause states that the Contracting Officer may, at any time, by written change order, make changes within the general scope of the contract in drawings, designs, plans, and specifications, work itemized, place of performance of the work, time of commencement or completion of the work, and any other requirement of the contract. [Ref. 4:252.217-3]

If a change causes an increase or decrease in the cost of, or time required for, performance of the contract, whether or not changed by the order, the Contracting Officer is to make an equitable adjustment in the price or date of completion, or both, and is to

modify the contract in writing. Within ten days after the contractor receives notification of the change, the contractor is to submit to the Contracting Officer a request for price adjustment, together with a written estimate of the increased cost. The Contracting Officer may grant an extension of this period if the contractor requests it within the ten day period. If the circumstances justify it, the Contracting Officer may accept and grant a request for equitable adjustment at any later time prior to final payment under the contract, except that the contractor may not receive profit on a payment under a late request. [Ref. 4:252.217-3]

The Changes Clause also states that, if the contractor includes in its claim the cost of property made obsolete or excess as a result of a change, the Contracting Officer has the right to prescribe the manner of disposition of that property. Also, failure to agree to any adjustment shall be a dispute within the meaning of the contract's Disputes Clause. Finally, nothing in the Changes Clause shall excuse the contractor from proceeding with the contract as changed. [Ref. 4:252.217-3 and 4]

One of the three SUPSHIP offices responded that usually the price is settled before the contractor does the work, but at other times the contractor is reluctant to get locked into a price because of the uncertainty of exactly what it will take to do the job. In these cases, this SUPSHIP office usually uses a max-priced modification to get the work into the contract and then settles on the price as soon as the work can be fully defined. A max-priced modification is an Undefinitized Contractual Action (UCA), which is a bilateral agreement between the Government and the contractor that allows the contractor to proceed with performance while the firm-fixed-price (FFP) modification is negotiated. However, the FFP negotiated will not be allowed to exceed the cap or ceiling price in the max-priced modification. If there is no agreement at all as to cost and time impact, and the work must be done during the current availability, this SUPSHIP office will issue a unilateral change order to incorporate the work into the contract. However, the SUPSHIP office says this is seldom necessary. A unilateral change order is a modification issued unilaterally by the Contracting Officer, directing the contractor to perform work without the price of the modification definitized. The unilateral change order contains a not-to-

exceed price, which the contractor is not authorized to exceed without the Contracting Officer's approval.

Another SUPSHIP office responded that, at the outset of an availability, the customer provides funding for "within scope" changes to the contract. This growth work or "over and above work" may be identified during the contract period of performance by either SUPSHIP or the contractor performing the work. In the latter instance, the contractor submits "condition found reports," which identify and describe additional repair requirements discovered during the performance of contract specification work items. The condition found report will often include recommendations for correcting the problem found.

This SUPSHIP office then reviews the report and determines whether correction of the condition by the contractor during the performance of the contract is desirable or necessary. If it is a condition requiring correction, a proposal request is prepared on a pre-printed price proposal form, which includes revisions to the contract specification(s) necessary to effect the correction. An independent Government cost estimate is also prepared reflecting the scope of work. The request for proposal is then forwarded to the contractor, who prepares a proposal for the work.

Upon receipt of contractor proposals less than \$10,000, the SUPSHIP ship surveyor cognizant of the trade discipline most prevalent in the changed requirement will review the proposal and negotiate an equitable price with the contractor. If the proposed price exceeds \$10,000, a SUPSHIP contract negotiator will negotiate the change. In both cases, the adjudicated value is recorded on the pre-printed price proposal form, which is submitted to the Contracting Officer for review along with the business clearance information appropriate to the value of the change and the type of analysis performed. The signature of the Contracting Officer on the pre-printed form is the contractor's authorization to proceed with the work of the change. The negotiated price proposal forms are grouped together and issued on Standard Form 30 documents, bilaterally executed.

In those instances where performance of the work is of such urgency that it must commence before proposal submission can be accomplished or negotiated, the work is initiated with the issue of a minimum or maximum priced supplemental agreement, an unpriced supplemental agreement or a change order, as the situation permits or requires.

Another SUPSHIP office responded that it has what is called a "condition report circuit", which establishes procedures for identification, authorization and negotiation of "over and above work." The contractor identifies a condition and provides technical justification for the accomplishment of the work as well as a cost estimate. The Contracting Officer's Technical Representative (COTR), who has limited approval authority, authorizes the work as appropriate. The SUPSHIP contract negotiator subsequently negotiates the condition reports in batches periodically with contractor representatives.

Another SUPSHIP office responded that it uses supplemental agreements to address "over and above work" in ship repair contracts. The contractor submits a "condition report," notifying the SUPSHIP office that additional or growth work is needed. A SUPSHIP office surveyor then verifies the need and prepares a Statement of Work (SOW) and an independent Government cost estimate. The contractor then submits a proposal, which is then negotiated and incorporated by contract modification.

D. SUPSHIP SAN DIEGO AND "OVER AND ABOVE WORK"

Until May 1991, SUPSHIP San Diego used an impact factor system, implemented with a bilateral Memorandum of Understanding (MOU), to negotiate D & D associated with changes, both growth and new work. The impact factor system was a method to negotiate and put into place adjustment factors that would be used to negotiate D & D. [Ref. 19:1]

Government-caused D & D to contractors results in contract cost growth and schedule overruns. The causes for the D & D can vary from contract modifications to Government personnel getting in the way of a contractor's work force. The amount of the

claims can be significant. For example, in the \$28.2 million ship repair contract for the USS FIFE (DD-991), the contractor was paid over \$6 million for D & D. [Ref. 10:17]

In May 1991, SUPSHIP San Diego unilaterally terminated the use of the impact factor system because data were not available to support the factors. SUPSHIP San Diego returned to the only available solution at the time--trying to negotiate D & D based on the individual merits of the specific change. Without a method in place to negotiate D & D, contractors and SUPSHIP San Diego personnel have continued to search for an alternative method to facilitate D & D negotiations. [Ref. 19:1]

Delay and disruption is only an issue with SUPSHIP San Diego's fixed-price contracts. In SUPSHIP San Diego's phased maintenance cost type contracts, D & D is never discussed. In a fixed-price contract environment, the contractor submits its proposal based on the SOW requirements in the solicitation document and is paid only the negotiated fixed-price of the contract to accomplish the SOW requirements. When a change is made to the contract SOW requirements due to growth work or "over and above work," the contractor may incur D & D costs, which would not have been anticipated when the contractor submitted its proposal based on the solicitation SOW requirements. Thus, in a fixed-price contract environment, the contractor will seek to be reimbursed for these D & D costs. In a cost type contract environment, the contractor is paid for all incurred allowable, reasonable, and allocable costs associated with the performance of the contract, including any changes to the contract SOW requirements due to "over and above work." The "over and above work" concept offers a tool that can facilitate D & D negotiations. [Ref. 19:1]

NAVSEA 028 authorized SUPSHIP San Diego to use the "over and above work" clause on a fixed-price basis. However, this does not help address the inherent D & D problem explained in the previous paragraph. San Diego contractors are reluctant to accept max-priced modifications. Issuing a change order, or modification, in a fixed-price environment, under the provisions of the "over and above work" clause without a max-price, would be the same as a unilateral change order. The problem with issuing a unilateral change order is that, as the contractor performs the work, the contractor incurs

actual costs that can be used as leverage when the price of the modification is negotiated or definitized. This results in a loss of negotiation leverage for the Government and shifts the cost risk of performing the modification work from the contractor to the Government, as if it was a cost type modification instead of a fixed-price modification. SUPSHIP San Diego is reluctant to issue unilaterals because of past command experience where issuing unilateral change orders became abused, leaving several thousand undefinitized modifications. This huge volume of unilaterals had to be negotiated before the associated contracts could be closed out, which created a horrendous contract administration problem. [Ref. 19:1]

Given that D & D is not an issue with cost type contracts, it has been suggested that NAVSEA 028 investigate use of a "hybrid" contract type, with the basic package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable. NAVSEA 028 has two primary concerns: [Ref. 19:2]

1. DFARS 217.7101(b) defines a job order under the Master Ship Repair Agreement (MSRA) as "fixed price." This requires that a deviation be processed through the Defense Acquisition Regulatory (DAR) Council to incorporate cost type language into the agreements.

2. Contractors may not be able to segregate costs between fixed-price and cost type work to the work item level.

Discussions with Arkhon Corporation representatives and other contractors indicate that segregating costs between fixed-price and cost type work to the work item level is indeed possible. A discussion with a local Defense Contract Audit Agency (DCAA) Regional Area Manager also reveals that the Air Force routinely uses this "hybrid" contract type for aircraft maintenance and overhauls, where the basic requirement is fixed-price and "over and above work" is cost-reimbursable. [Ref. 19:2]

The benefit of using this "hybrid" contract type is that D & D is no longer an issue. Disadvantages include the inability to close out contracts in a timely manner, coupled with additional training and contractor oversight requirements. [Ref. 19:2]

SUPSHIP San Diego's OGC reviewed and suggested revisions to the proposed draft contract clauses, the Memorandum of Agreement (MOA) between SUPSHIP San Diego and the contractor, and SUPSHIP San Diego's internal procedures memorandum, all of which would be used to incorporate the DFARS "over and above work" provisions into the ELLIOT SRA contract. However, SUPSHIP San Diego's OGC felt that the purpose of the proposed contract clauses and MOA would be served by use of the litigation tested Additional Requirements Clause used by the MSC. [Ref. 13:1-2]

On 14 July 1993, SUPSHIP San Diego sent a letter to the Government and Contract Affairs (GCA) subcommittee of the Port of San Diego Ship Repair Association (SDSRA). The letter explained the "over and above work" provisions that SUPSHIP San Diego intended to incorporate in a future solicitation as a test to facilitate the start of growth work or "over and above work." The letter also requested that copies of these provisions be made available to members of the SDSRA and that the GCA Subcommittee solicit their comments. [Ref. 23:1]

On 25 October 1993, SUPSHIP San Diego sent another letter to the SDSRA GCA Subcommittee, which advised that no comments or feedback were received from SDSRA members in response to the SUPSHIP San Diego letter of 14 July 1993. As such, this second letter provided the "over and above work" provisions that SUPSHIP San Diego intended to incorporate as a test into solicitation N62791-94-B-0018 for the ELLIOT fiscal year (FY) 1994 SRA. [Ref. 24:1]

E. DODIG AUDIT OF CONTROL OF "OVER AND ABOVE WORK"

The DODIG reviewed eight maintenance, repair, and overhaul contracts which included "over and above work." The contracts included Army, Navy, and Air Force procurements and covered aviation, ship, and ground systems. The DODIG audit objective was to determine the effectiveness of the management of "over and above work" clauses in weapon systems repair and overhaul contracts. [Ref. 6:2]

The DODIG reviewed the Military Departments' and Defense Logistics Agency's (DLA's) guidance on managing "over and above work" clauses in weapon systems repair and overhaul contracts to determine if the applicable policies and procedures for controlling "over and above work" were effective. [Ref. 6:3]

The DODIG reviewed the effectiveness of the Government and contractor practices and procedures for requesting, processing, and approving "over and above work" requests during FY 1991 for eight judgmentally selected repair and overhaul contracts. There were 43,579 "over and above work" requests valued at \$50.8 million submitted by the contractors during FY 1991 for these eight contracts reviewed. The DODIG statistically selected 545 "over and above work" requests valued at \$3.4 million for review. The DODIG reviewed the labor hours only. [Ref. 6:3]

The DODIG evaluated the internal controls established by the Military Departments and the DLA for processing and approving "over and above work" requests. For the eight contracts reviewed, the internal controls were deemed to be effective since no material deficiencies were disclosed by the audit. [Ref. 6:4]

F. SUMMARY

This chapter presented an overview of the "over and above work" concept and identified how the MSC and selected SUPSHIP offices address "over and above work." This chapter also presented SUPSHIP San Diego's efforts to facilitate the start of growth work and D & D negotiations by incorporating "over and above work" provisions as a test into the ELLIOT SRA solicitation. In addition, this chapter presented the DODIG finding that the management of "over and above work" clauses in weapon systems repair and overhaul contracts has been effective. The next chapter presents data on the amount and impact of "over and above work" in ship repair contracts.

III. EXTENT OF "OVER AND ABOVE WORK"

A. INTRODUCTION

The purpose of this chapter is to provide data on the amount and impact of "over and above work," or growth work, in ship repair contracts. This chapter presents the findings of two General Accounting Office (GAO) reports to the Congress on cost growth and schedule overruns at shipyards. In addition, this chapter presents Government estimate, contract award price, final contract cost, and growth work data collected by SUPSHIP San Diego for selected CNO availabilities in San Diego from FY 1985 to FY 1994. Also, this chapter presents data on the extent "over and above work" has been discovered during the performance of FY 1994 ship repair contracts awarded by other SUPSHIP offices.

B. GAO REPORTS ON COST GROWTH AND SCHEDULE OVERRUNS AT SHIPYARDS

In a 1986 report to the Senate Appropriations Committee, the GAO reviewed the estimated and actual cost to overhaul Navy ships at private shipyards. The GAO obtained information on the 105 regular ship overhauls performed in private shipyards from FY 1982 through May 1985. The GAO compared contract award amounts, Government estimates, and final contract prices, reviewed selected contract modifications and ascertained their effects on contract costs, and contrasted the size of price increases in the fixed-price contracts with those in the cost-type contracts. [Ref. 9:1]

The GAO found that overhaul costs increased significantly between the time of contract award and the time of contract completion. Such increases occurred under each of the 105 contracts, which consisted of seventy-five fixed-price contracts and thirty cost-type contracts. On the seventy-five fixed-price contracts, the prices increased from \$594 million to \$967 million, a difference of \$373 million, or sixty-three percent. On the thirty cost-type contracts, the prices increased from \$539 million to \$728 million, a difference of \$189 million, or thirty-five percent. [Ref. 9:1]

The GAO also found that seventy-one of the seventy-five fixed-price contracts and twenty-four of the thirty cost-type contracts were awarded at prices below the Government estimates. These differences averaged thirty-one percent and twenty-one percent, respectively. [Ref. 9:1]

The increases in contract costs between award and completion were the result of modifications for growth work and new work. According to the Navy, growth work accounted for seventy-six percent and new work accounted for twenty-four percent of the cost increases on fixed-price contracts. On cost-type contracts, growth work amounted to sixty-six percent and new work thirty-four percent. [Ref. 9:1 and 8]

The GAO analyzed selected modifications for twenty-five fixed-price contracts and found, in contrast to the experience on initial awards, that the Navy paid more than the Government estimated that these modifications should cost. The GAO analysis showed that the final negotiated prices averaged twenty-seven percent more than the Government estimates. Navy officials stated that the higher prices were the result of negotiating on a sole-source basis with the original contractor rather than negotiating competitively, allowing premium pay for overtime and weekend work to meet scheduled completion dates, and reimbursing the contractor for the costs of D & D caused by modifications. [Ref. 9:2 and 8]

In a 1990 report to the House of Representatives Armed Services Committee, the GAO reviewed the costs to overhaul and repair Navy ships at public and private shipyards and determined the extent and causes of cost growth and schedule overruns at the shipyards. The GAO compared contract award prices with final contract prices for maintenance work on 402 ships, which was completed at private shipyards between FY 1985 and FY 1988. The GAO found that the contract costs increased from \$2.8 billion to \$3.7 billion, a difference of about thirty percent. The final prices exceeded the award prices on 357 of the 402 contracts. [Ref. 10:1-3]

The GAO also compared initial Government estimates with actual costs at completion of maintenance work on 238 ships at public shipyards during the same period. The costs increased from \$8.4 billion to \$8.7 billion, a difference of about three percent.

This figure is not fully comparable to the growth at private shipyards because Government estimates for work at public shipyards generally include a ten-percent growth factor not included in the contract award prices for private shipyards. [Ref. 10:3]

Originally scheduled completion dates frequently were exceeded. At the private shipyards, work on 169 of 453 ships, or thirty-seven percent, overran the original schedules by an average of forty-three days. The overruns ranged from one day to 259 days, with sixty-nine ships exceeding thirty days. The number and percentage of ships with schedule overruns increased each FY. At the public shipyards, work on 129 of 238 ships, or fifty-four percent, overran the original schedules by an average of eighty-one days. The overruns ranged from one day to 526 days, with seventy-one ships exceeding thirty days. The number and percentage of ships with schedule overruns also increased each FY. [Ref. 10:3 and 14]

Many factors contributed to the cost growth and schedule overruns. In the private sector, the highly competitive market for Navy ship maintenance and modernization work has caused contractors to submit low price proposals to obtain the Navy work. Contractor bids are influenced by competition and do not include factors for cost growth. The market for Navy ship maintenance and modernization work is very competitive because no commercial ships are being built and little commercial ship repair work is being performed in the United States. Private shipyards have more capacity than the Navy needs and contractors tend to submit low price proposals to obtain the Navy work. Some Navy officials told the GAO that contractors later take every opportunity to increase the price after the contract is awarded. According to these Navy officials and industry experts, contractors routinely "low-ball" the Navy in the expectation of "getting well" on contract modifications. [Ref. 10:3 and 15]

According to the 1990 GAO report to the House of Representatives Armed Services Committee, current laws and regulations provide no basis to exclude an otherwise technically acceptable, responsible contractor from a competition solely on the basis that the contractor submitted an excessively low contract price proposal. If it can be determined that the contractor can sustain the loss and is otherwise responsible, the Navy

must award the contract. The regulations, however, caution the Contracting Officer to take appropriate action to ensure that losses are not recovered by the contractor through the pricing of change orders or follow-on contracts. [Ref. 10:15-16]

Data compiled by the Shipbuilders Council of America indicate that the United States shipbuilding and ship repair industry is almost totally dependent on the Government for ship construction and ship repair work. For example, in 1987 about ninety-five percent of the private industry's work was dedicated to Government orders. The Council reports that many private shipyards are going out of business and that, between October 1982 and the end of 1987, forty-one shipyards closed and 32,000 production workers lost their jobs. [Ref. 10:16]

Because competition is intense for the limited amount of Government work, the Navy is receiving favorable contract award prices. Contract award prices on the 453 ships awarded between 1985 and 1988 averaged twenty-two percent below the estimates the Navy had developed for budget projections and comparative purposes before awards. However, subsequent contract modifications more than offset this difference. [Ref. 10:16]

The amount of labor and material required to do a modification is negotiated and a forward pricing rate and a profit factor are applied. The forward pricing rate is based on a contractor's experienced costs and is audited by the DCAA and approved by the SUPSHIP office. Because a profit factor is applied, the more contract modifications, the more opportunities a contractor has to recover from the effect of a low-ball bid. According to Navy officials, the more competition favorably influences a contract award price, the more incentive a contractor has to find a need for contract modifications and to be uncompromising in negotiating the price of modifications. [Ref. 10:16]

Other reasons for the schedule delays and the cost increases at private shipyards include the inability to determine exact maintenance requirements beforehand, poorly defined work packages, inadequate and late government furnished information, problems in obtaining materials, Government-caused D & D, and unplanned work added after contract award. Other factors include weather, labor strikes, late discovery of material deficiencies, poor contractor quality controls, and award of contracts to small, marginally

qualified ship repair contractors that take on large, complex repair jobs and experience tremendous learning curves. [Ref. 10:3 and 18]

At the public shipyards, some of the reasons for the delays and increased costs were similar to those in the private sector. The conditions of the ships were not adequately known beforehand, work packages were poorly defined, problems were encountered in obtaining materials, and unplanned work was subsequently added. In addition, labor resources sometimes were insufficient to execute the work load properly. Also, since 1985 the Navy has placed more emphasis on cost control and less on schedule adherence. As a result, the percentage of ships meeting scheduled completion dates in public shipyards decreased to thirty-three percent in FY 1988. [Ref. 10:4]

The Navy has been able to absorb the cost growth for work done by both private and public shipyards within approved budgets because the budgets are based on historical costs for similar ships rather than on contract award prices in private shipyards or initial Government estimates in public shipyards. Also, whenever cost growth becomes apparent, the Navy makes program decisions to adjust work packages of other ships scheduled for future maintenance and modernization to bring the total program back into balance. [Ref. 10:13]

C. SUPSHIP SAN DIEGO FY 1985 TO FY 1994 GROWTH WORK DATA

Since FY 1985, SUPSHIP San Diego has collected Government estimate, contract award price, final contract cost, and growth work data for selected CNO availabilities in San Diego. The data, which are provided as Appendix F, are available as a FY total and as a FY average for each FY from FY 1985 to FY 1994. [Ref. 18]

The Government estimates for the eleven FY 1985 contracts reviewed total \$106,841,489, for an average contract Government estimate of \$9,712,863. The contract award prices for these eleven FY 1985 contracts total \$50,085,748, for an average contract award price of \$4,553,250. The Government estimates for the eleven FY 1985 contracts exceed the contract award prices by a total of \$56,755,741, or by an average of

\$5,159,613 per contract. The ratio of average contract award price to Government estimate is forty-seven percent, which means the FY 1985 average contract award price is fifty-three percent under the Government estimate. The final contract costs for the eleven FY 1985 contracts total \$99,911,776, for an average final contract cost of \$9,082,889. The final contract costs for the eleven FY 1985 contracts exceed the contract award prices by a total of \$49,826,028, or by an average of \$4,529,639 per contract. Thus, growth work averages ninety-nine percent above the contract award price for the eleven FY 1985 contracts reviewed. [Ref. 18]

The Government estimates for the twelve FY 1986 contracts reviewed total \$42,070,346, for an average contract Government estimate of \$3,505,862. The contract award prices for these twelve FY 1986 contracts total \$25,752,989, for an average contract award price of \$2,146,082. The Government estimates for the twelve FY 1986 contracts exceed the contract award prices by a total of \$16,317,357, or by an average of \$1,359,780 per contract. The ratio of average contract award price to Government estimate is sixty-one percent, which means the FY 1986 average contract award price is thirty-nine percent under the Government estimate. The final contract costs for the twelve FY 1986 contracts total \$30,086,636, for an average final contract cost of \$2,507,220. The final contract costs for the twelve FY 1986 contracts exceed the contract award prices by a total of \$4,333,647, or by an average of \$361,137 per contract. Thus, growth work averages seventeen percent above the contract award price for the twelve FY 1986 contracts reviewed. [Ref. 18]

The Government estimates for the twenty-six FY 1987 contracts reviewed total \$84,453,422, for an average contract Government estimate of \$3,248,209. The contract award prices for these twenty-six FY 1987 contracts total \$75,706,816, for an average contract award price of \$2,911,801. The Government estimates for the twenty-six FY 1987 contracts exceed the contract award prices by a total of \$8,746,606, or by an average of \$336,408 per contract. The ratio of average contract award price to Government estimate is ninety percent, which means the FY 1987 average contract award price is ten percent under the Government estimate. The final contract costs for the

twenty-six FY 1987 contracts total \$88,801,959, for an average final contract cost of \$3,415,469. The final contract costs for the twenty-six FY 1987 contracts exceed the contract award prices by a total of \$13,095,143, or by an average of \$503,659 per contract. Thus, growth work averages seventeen percent above the contract award price for the twenty-six FY 1987 contracts reviewed. [Ref. 18]

The Government estimates for the sixteen FY 1988 contracts reviewed total \$54,136,076, for an average contract Government estimate of \$3,383,505. The contract award prices for these sixteen FY 1988 contracts total \$49,328,716, for an average contract award price of \$3,083,045. The Government estimates for the sixteen FY 1988 contracts exceed the contract award prices by a total of \$4,807,360, or by an average of \$300,460 per contract. The ratio of average contract award price to Government estimate is ninety-one percent, which means the FY 1988 average contract award price is nine percent under the Government estimate. The final contract costs for the sixteen FY 1988 contracts total \$63,482,902, for an average final contract cost of \$3,967,681. The final contract costs for the sixteen FY 1988 contracts exceed the contract award prices by a total of \$14,064,236, or by an average of \$879,015 per contract. Thus, growth work averages twenty-nine percent above the contract award price for the sixteen FY 1988 contracts reviewed. [Ref. 18]

The Government estimates for the nineteen FY 1989 contracts reviewed total \$66,931,598, for an average contract Government estimate of \$3,522,716. The contract award prices for these nineteen FY 1989 contracts total \$62,186,181, for an average contract award price of \$3,272,957. The Government estimates for the nineteen FY 1989 contracts exceed the contract award prices by a total of \$4,745,417, or by an average of \$249,759 per contract. The ratio of average contract award price to Government estimate is ninety-three percent, which means the FY 1989 average contract award price is seven percent under the Government estimate. The final contract costs for the nineteen FY 1989 contracts total \$81,431,296, for an average final contract cost of \$4,285,858. The final contract costs for the nineteen FY 1989 contracts exceed the contract award prices by a total of \$19,245,115, or by an average of \$1,012,901 per contract. Thus, growth

work averages thirty-one percent above the contract award price for the nineteen FY 1989 contracts reviewed. [Ref. 18]

The Government estimates for the twenty-two FY 1990 contracts reviewed total \$81,859,546, for an average contract Government estimate of \$3,720,888. The contract award prices for these twenty-two FY 1990 contracts total \$71,378,608, for an average contract award price of \$3,244,482. The Government estimates for the twenty-two FY 1990 contracts exceed the contract award prices by a total of \$10,480,938, or by an average of \$476,406 per contract. The ratio of average contract award price to Government estimate is eighty-seven percent, which means the FY 1990 average contract award price is thirteen percent under the Government estimate. The final contract costs for the twenty-two FY 1990 contracts total \$88,795,724, for an average final contract cost of \$4,036,169. The final contract costs for the twenty-two FY 1990 contracts exceed the contract award prices by a total of \$17,417,116, or by an average of \$791,687 per contract. Thus, growth work averages twenty-four percent above the contract award price for the twenty-two FY 1990 contracts reviewed. [Ref. 18]

The Government estimates for the twenty-three FY 1991 contracts reviewed total \$57,195,282, for an average contract Government estimate of \$2,486,751. The contract award prices for these twenty-three FY 1991 contracts total \$42,279,166, for an average contract award price of \$1,838,225. The Government estimates for the twenty-three FY 1991 contracts exceed the contract award prices by a total of \$14,916,116, or by an average of \$648,527 per contract. The ratio of average contract award price to Government estimate is seventy-four percent, which means the FY 1991 average contract award price is twenty-six percent under the Government estimate. The final contract costs for the twenty-three FY 1991 contracts total \$58,228,139, for an average final contract cost of \$2,531,658. The final contract costs for the twenty-three FY 1991 contracts exceed the contract award prices by a total of \$15,948,973, or by an average of \$693,434 per contract. Thus, growth work averages thirty-eight percent above the contract award price for the twenty-three FY 1991 contracts reviewed. [Ref. 18]

The Government estimates for the thirty-seven FY 1992 contracts reviewed total \$144,194,710, for an average contract Government estimate of \$3,897,154. The contract award prices for these thirty-seven FY 1992 contracts total \$108,257,971, for an average contract award price of \$2,925,891. The Government estimates for the thirty-seven FY 1992 contracts exceed the contract award prices by a total of \$35,936,739, or by an average of \$971,263 per contract. The ratio of average contract award price to Government estimate is seventy-five percent, which means the FY 1992 average contract award price is twenty-five percent under the Government estimate. The final contract costs for the thirty-seven FY 1992 contracts total \$156,600,709, for an average final contract cost of \$4,232,452. The final contract costs for the thirty-seven FY 1992 contracts exceed the contract award prices by a total of \$48,342,738, or by an average of \$1,306,560 per contract. Thus, growth work averages forty-five percent above the contract award price for the thirty-seven FY 1992 contracts reviewed. [Ref. 18]

The Government estimates for the thirteen FY 1993 contracts reviewed total \$50,965,469, for an average contract Government estimate of \$3,920,421. The contract award prices for these thirteen FY 1993 contracts total \$32,018,621, for an average contract award price of \$2,462,971. The Government estimates for the thirteen FY 1993 contracts exceed the contract award prices by a total of \$18,946,848, or by an average of \$1,457,450 per contract. The ratio of average contract award price to Government estimate is sixty-three percent, which means the FY 1993 average contract award price is thirty-seven percent under the Government estimate. The final contract costs for the thirteen FY 1993 contracts total \$46,354,209, for an average final contract cost of \$3,565,708. The final contract costs for the thirteen FY 1993 contracts exceed the contract award prices by a total of \$14,335,588, or by an average of \$1,102,738 per contract. Thus, growth work averages forty-five percent above the contract award price for the thirteen FY 1993 contracts reviewed. [Ref. 18]

The Government estimates for the twenty FY 1994 contracts reviewed total \$69,646,587, for an average contract Government estimate of \$3,482,329. The contract award prices for these twenty FY 1994 contracts total \$41,413,134, for an average

contract award price of \$2,070,657. The Government estimates for the twenty FY 1994 contracts exceed the contract award prices by a total of \$28,233,453, or by an average of \$1,411,673 per contract. The ratio of average contract award price to Government estimate is fifty-nine percent, which means the FY 1994 average contract award price is forty-one percent under the Government estimate. Data for FY 1994 are through August 30, 1994, so final contract costs for the twenty FY 1994 contracts are not available. Thus, the percent of growth work above the contract award prices for the twenty FY 1994 contracts reviewed is unknown. [Ref. 18]

Analysis of the data shows that the percentage of growth work above the contract award price dropped sharply from a high of ninety-nine percent in FY 1985 to a low of seventeen percent in FY 1986 and FY 1987. Growth work then steadily increased as a percentage above the contract award price during the next two FYs, nearly doubling to thirty-one percent in FY 1989. Growth work then decreased nearly twenty-five percent as a percentage above the contract award price to twenty-four percent the following FY. Growth work again then steadily increased as a percentage above the contract award price during the next two FYs, nearly doubling to forty-five percent in FY 1992. Growth work then remained the same percentage above the contract award price, forty-five percent, in FY 1993.

Analysis of the data also shows that the ratio of average contract award price to Government estimate nearly doubled from a low of forty-seven percent in FY 1985 to ninety percent in FY 1987. The ratio of average contract award price to Government estimate remained above ninety percent the next two FYs, reaching a high of ninety-three percent in FY 1989. Since FY 1989, the ratio of average contract award price to Government estimate steadily decreased over thirty-three percent to fifty-nine percent in FY 1994.

Analysis of the data also shows that the percentage of growth work above the contract award price was at a high of ninety-nine percent and that the ratio of average contract award price to Government estimate was at a low of forty-seven percent in the same FY, FY 1985. Since FY 1990, the percentage of growth work above the contract

award price steadily increased while, at the same time, the ratio of average contract award price to Government estimate steadily decreased.

D. EXTENT OF "OVER AND ABOVE WORK" AT SELECTED SUPSHIP OFFICES

The data presented in this section are from survey questionnaire responses received from selected SUPSHIP offices. As the data show, the extent of "over and above work" varies from one SUPSHIP office to another.

One SUPSHIP office awarded twenty-six ship repair contracts in FY 1994. Contract award prices for these twenty-six contracts total \$2,361,020, while current contract costs for these twenty-six contracts total \$3,181,112. Thus, the current contract costs for these twenty-six contracts exceed the contract award prices by a total of \$820,092. So this one SUPSHIP office is experiencing growth work of thirty-five percent above the contract award price. This SUPSHIP office responds that the impact of growth work on these ship repair contracts is minimal. Growth work is discovered early, normally within the first twenty-five percent of the contract performance schedule. This is an aggressive approach taken by the SUPSHIP administrative staff and the contractor to resolve problems early. For this one SUPSHIP office, the number of changes this year are not at a level to cause cumulative impact as a result of the synergistic effect of numerous changes to the basic contract work.

Another SUPSHIP office awarded 205 ship repair contracts in FY 1994. Total contract award value is \$58 million. The current contract costs for these 205 contracts exceed the contract award prices by over \$16 million. So this one SUPSHIP office is experiencing growth work of twenty-eight percent above the contract award price. This SUPSHIP office responds that, typically, the impact of growth work on the contract schedule is not very great in the longer ship repair availabilities done in the contractor's plant. In the smaller jobs, done pierside at the Naval Station, there is usually a lot more growth work encountered and, therefore, more risk of delays in completing the work. The usual cause for the delay is simply the additional time required to perform the

additional work. Rarely is the contract schedule extended due to delays in administratively incorporating the growth work into the contract.

Another SUPSHIP office awarded twelve ship repair contracts in FY 1994. This SUPSHIP office responds that there is little or no growth work being experienced on these twelve contracts and no impact to the contract schedules. Another SUPSHIP office awarded twenty ship repair contracts in FY 1994. This SUPSHIP office responds that some overhauls are experiencing growth work as much as 100 percent above the contract award price. The SUPSHIP office states that the contractors are managing to perform the growth work with minimal impact to the contract schedules. Another SUPSHIP office awarded thirty-one ship repair contracts in FY 1994. This SUPSHIP office responds that the current contract costs for these thirty-one contracts exceed the contract award prices by approximately \$6,940,000.

E. SUMMARY

This chapter presented the findings of two GAO reports to the Congress on cost growth and schedule overruns at shipyards. This chapter also presented Government estimate, contract award price, final contract cost, and growth work data collected by SUPSHIP San Diego for selected CNO availabilities in San Diego from FY 1985 to FY 1994. In addition, this chapter presented data on the extent "over and above work," or growth work, has been discovered during the performance of FY 1994 ship repair contracts awarded by other SUPSHIP offices. The next chapter presents an analysis of the lessons learned and the positive and negative feedback from Government and contractor personnel involved with the local test incorporation of the DFARS "over and above work" provisions in the ELLIOT SRA contract.

IV. A LOCAL TEST INCORPORATION OF THE "OVER AND ABOVE WORK" PROVISIONS IN A SHIP REPAIR CONTRACT

A. INTRODUCTION

The purpose of this chapter is to present how SUPSHIP San Diego incorporated the DFARS "over and above work" provisions as a local test in the ELLIOT SRA contract. This chapter also presents the internal SUPSHIP San Diego "over and above work" procedures used during the ELLIOT SRA contract. This chapter identifies and provides an analysis of the test results, the lessons learned, and the positive and negative feedback from Government and contractor personnel involved with the ELLIOT SRA contract. In addition, this chapter provides an analysis of the "over and above work" concept and the issue of ship repair contractors recovering losses through contract modifications.

B. ELLIOT SRA CONTRACT "OVER AND ABOVE WORK" PROVISIONS

The ELLIOT SRA contract "over and above work" provisions are provided as Appendix G. The "over and above work" contract line item numbers (CLINs) in Section B of the ELLIOT SRA contract are for the purpose of covering work which is required to be performed under the basic CLINs of the contract but which is not included within the scope and firm-fixed prices of those basic CLINs. The contractor is tasked with identifying needed repairs and recommending corrective action during contract performance for those deficiencies discovered which are not covered by the basic contract or subsequent contract modifications. The contractor is to submit these needed repairs and recommended corrective actions to the Government in the form of an Inspection Deficiency Report (IDR), which is also known as a work request within the meaning of the DFARS "over and above work" clause at 252.217-7028. [Ref. 15:8]

As a minimum, the IDR is to be serialized by IDR number, include the contract number, and identify the basic contract work item number that the needed repairs and

recommended corrective actions apply to. In addition, the IDR is to include a description of the deficiency discovered, the specific location of the deficiency, and a recommendation for corrective action. As an attachment to the IDR, the contractor is to submit an estimate of the direct labor hours, including any administrative time in direct support of the contract, overtime, double time, and D & D hours, subcontractor costs, and material costs required to correct the deficiency. However, if sufficient information is available, the contractor is to submit, as an attachment to the IDR, a proposal in the form of a Change Order Price Analysis (COPA) in sufficient detail with which to negotiate a FFP contract modification. The contractor is to indicate on the IDR whether the attached price information represents estimates or a COPA to be negotiated. The IDR is to also identify any related changes, if any, to the contract delivery schedule or internal milestone dates. [Ref. 15:9]

The contractor is not to split required work into several IDRs to avoid any given dollar threshold. To the maximum extent possible, all efforts are to be made to negotiate a FFP contract modification prior to the start of the "over and above work." Negotiations are to be conducted in accordance with established procedures. Failure to agree upon a reasonable price is to be considered a question of fact subject to the Disputes clause of the contract. [Ref. 15:10]

The ACO is to initial all IDR responses which authorize the contractor to proceed with corrective action prior to the price being negotiated. The authorization, or order, is to include a dollar amount which represents the limitation of Government liability. Written authorization to proceed, which includes the limitation of Government liability, must be received by the contractor from the ACO before performance of the "over and above work" starts. [Ref. 15:10]

The limitation of Government liability, which is the maximum amount that the Government will be obligated to pay the contractor for performance of the "over and above work" until the order is definitized, is to be that amount identified on the authorization for the contractor to proceed with performance. The contractor is not authorized to make expenditures or incur obligations exceeding the limitation of

Government liability set forth in the authorization. If such expenditures are made, or if such obligations are incurred, they are at the contractor's sole risk and expense. In addition, the limitation of liability is the maximum Government liability if the order is terminated. [Ref. 15:9]

If at any time the contractor believes that its expenditures under an undefinitized "over and above work" authorization will exceed the limitation of Government liability, the contractor is to notify the Contracting Officer in writing and propose an appropriate increase in the limitation of Government liability for the authorization. Within five days of such notice, the Contracting Officer is to either notify the contractor in writing of the increase in the limitation of Government liability for the authorization or instruct the contractor how and to what extent the "over and above work" is to continue. However, in no event is the contractor obligated to proceed with "over and above work" on an undefinitized authorization beyond the point where its costs incurred plus a reasonable profit thereon exceed the limitation of Government liability. Also, in no event is the Government obligated to pay the contractor any amount in excess of the limitation of Government liability specified in any undefinitized authorization prior to establishment of firm prices. [Ref. 15:9]

Upon receipt of an IDR response initialed by the ACO but not yet negotiated, the contractor is to diligently proceed with performance of the "over and above work." Within ten days after the contractor receives notification to proceed with performance of "over and above work" for which a price has not been negotiated and for which the contractor has not submitted a COPA, or price proposal, for purposes of negotiation, the contractor is to submit to the Government a detailed COPA. The total proposed price of the COPA is not to exceed the estimate submitted with the IDR. The Contracting Officer may grant an extension of this ten day period if the contractor requests it within the ten day period. If the circumstances permit it, the Contracting Officer may accept and negotiate a COPA, or price proposal, at any later time prior to final payment under the contract, except that the contractor may not receive profit on a payment under a late request. [Ref. 15:8 and 10]

All "over and above work" authorized and performed is funded under CLINs 0004 through 0006 in Section B of the contract. No invoices are to be submitted against CLINs 0004 through 0006 and CLINs 0004 through 0006 are not to be incorporated into the Work in Progress Report (WKP 500) for the purpose of calculating percentage of work completed. The WKP 500 is to always show zero progress for the "over and above work" CLINs. The work request proposals, or IDRs, and associated COPAs are to be negotiated and definitized by use of the Standard Form (SF) 30. This SF 30 is to transfer funding from, or decrease, CLINs 0004 through 0006 and to increase the appropriate CLIN in the basic contract for that work item. Following negotiation of the COPA and preparation of the contract modification SF 30, the Government is to update the WKP 500 to reflect actual work performed as of the negotiation settlement date. At the end of contract performance and after all "over and above work" has been definitized, a bilateral SF 30 is to be prepared and executed, deobligating unused funding on the "over and above work" CLINs. [Ref. 15:10-11]

The contractor is to segregate and track costs in accordance with the Change Order Accounting provisions of the contract. Any "over and above work" authorized to proceed prior to reaching agreement on a negotiated price, or which is not negotiated prior to completion of performance, is to be negotiated based on actual costs incurred. The actual incurred costs submitted by the contractor are subject to review and verification, as determined by the ACO, by the DCAA. [Ref. 15:10]

C. INTERNAL SUPSHIP SAN DIEGO "OVER AND ABOVE WORK" PROCEDURES

An "over and above work" pool of money is established by SUPSHIP Code 710, the Funds Administrator, for the purpose of committing funds, using SUPSHIP Form 7302/12 (Commitment/Obligation/Expenditure), with the establishment of the "over and above work" CLIN. The contractor's IDR is submitted to the SUPSHIP Supervisory Surveyor, who logs the IDR in, removes the attached contractor COPA or estimate, and

passes the IDR to the appropriate SUPSHIP Surveyor for review and verification. [Ref. 16:1]

The SUPSHIP Surveyor reviews the IDR to validate that the noted deficiency is not covered by the contract and that the "over and above work" needs to be performed. The SUPSHIP Surveyor then develops an independent Government estimate for the required work and submits a recommendation to the SUPSHIP Supervisory Surveyor for action. One or more scoping conferences between the contractor and Government surveyor may be required to ensure that the "over and above work" to be performed is clearly understood by all parties. [Ref. 16:1]

The SUPSHIP Supervisory Surveyor matches the SUPSHIP Surveyor input with the contractor's COPA or estimate which was previously removed from the IDR, reviews and endorses the recommendation from the SUPSHIP Surveyor, and passes the recommendation to the SUPSHIP Project Manager for a decision on whether to proceed with the "over and above work." The SUPSHIP Project Manager also maintains a financial balance sheet for funding available under the "over and above work" CLIN. If the decision is to authorize the contractor to proceed with the "over and above work," an entry is made in the "over and above work" funding log, using the higher of the independent Government estimate or the estimate prepared by the contractor, to indicate the estimated value of the financial commitment. A running balance in this log is maintained. No "over and above work" is authorized if insufficient funds are available on the "over and above work" CLIN to cover the potential Government liability. [Ref. 16:1]

The SUPSHIP Project Manager then initials the authorization, annotates the authorization with "Limitation of Government Liability is \$," filling in the blank using the lower of the independent Government estimate or the estimate prepared by the contractor, and has the SUPSHIP ACO initial all "over and above work" authorizations which require the contractor to begin work prior to definitizing the price for that effort. Upon receipt of the contractor's COPA, negotiations are conducted in accordance with established procedures. Once negotiated, the SUPSHIP ACO initiates action to obligate funds by notifying SUPSHIP Code 710, using SUPSHIP Form 7302/12, to de-commit the

"over and above work" CLIN and obligate the definitized or negotiated price. [Ref. 16:1-2]

The SUPSHIP ACO then distributes signed copies of SF 30s to the SUPSHIP Project Manager, who updates the "over and above work" funding log with definitized prices. In addition, the SUPSHIP Project Manager takes action to ensure the WKP 500 is updated to reflect the new contract value and amount of work, labor and material, performed by the contractor as of the negotiation settlement date. When the SUPSHIP Project Manager projects that future "over and above work" will exceed the remaining "over and above work" funds available, the SUPSHIP Project Manager initiates a request for additional funds to increase the value of the "over and above work" CLIN. [Ref. 16:2]

D. ANALYSIS OF THE ELLIOT SRA LOCAL TEST

Data resulting from the ELLIOT SRA local test are provided as Appendix H. Included in Appendix H are data from the USS COPELAND (FFG-25) SRA and the USS RENTZ (FFG-46) Drydock Selected Restricted Availability (DSRA). All three ships were in FFP availabilities at SWM during the same time period. Only the ELLIOT SRA contract contained the "over and above work" provisions.

The ratio of IDRs submitted by SWM to modifications issued by SUPSHIP San Diego was 3.9:1 for the ELLIOT SRA, compared to 5.7:1 for the COPELAND SRA and 7.4:1 for the RENTZ DSRA. The number of modifications issued was seventy-two for the ELLIOT SRA, fifty-seven for the COPELAND SRA, and ninety-one for the RENTZ DSRA. Multiplying the number of modifications issued by the ratio of IDRs to modifications indicates that the number of IDRs submitted by SWM was 281 for the ELLIOT SRA, 325 for the COPELAND SRA, and 673 for the RENTZ DSRA. The average number of days from IDR receipt by SUPSHIP San Diego to negotiated modification was 2.5 for the ELLIOT SRA, 12.3 for the COPELAND SRA, and 14.9 for the RENTZ DSRA.

The identification of growth to settlement was much quicker during the ELLIOT SRA contract compared to the other contracts not having the "over and above work"

provisions. This proved highly successful as the ELLIOT SRA contract experienced almost 100 percent growth during an initial availability of less than two months. The ELLIOT SRA contract award price was \$1,099,895 while the contract experienced \$1,040,000 in growth work. Contract extensions were not due to an inability to settle, but rather, to circumstances beyond the control of either SWM or SUPSHIP San Diego. The contract extensions were due mainly to late arriving material for the waste heat boilers and problems with the torpedo strike down system. [Ref. 8:1]

An apparent understanding by both SUPSHIP San Diego and SWM that the inability to reach settlement would benefit neither party contributed to the much lower average number of days from IDR receipt to negotiated modification. That is, SUPSHIP San Diego would have had to issue a unilateral change order, perhaps more than once; SWM would have had the added responsibility and additional costs associated with tracking costs; and an increase in correspondence and administrative effort would have been experienced by both parties had the issuance of unilaterals or the segregation and tracking of costs been necessary. SUPSHIP San Diego did not have to issue any unilateral change orders during the ELLIOT SRA since SWM and SUPSHIP San Diego were able to successfully negotiate all "over and above work" modifications. [Ref. 8:1]

Perhaps there was a perception on the part of both SUPSHIP San Diego and SWM that non-settlement would lead to a "cost" scenario in which the Government perceives the contractor will get its costs, however great, and the contractor realized that costs incurred would exclude profit and be a long time in coming since the costs would have to be audited, etc. Whichever the case, if either is the case, the SUPSHIP San Diego ACO for the ELLIOT SRA contract believes neither party negotiated along the "hard line" but rather to the concept that it was in both parties' best interests to reach a settlement that was fair and reasonable as quickly as practicable. [Ref. 8:1]

The much lower average number of days from IDR receipt to negotiated modification could be explained by other reasons, such as the SUPSHIP San Diego project management code assigned, SWM's project team, the understandings obtained by the ACO between the parties prior to the start of the contract, the method of increasing

funding (via unilateral modification, which put SWM on notice as to the amount of funds available in the "over and above work" CLINs), the amount of growth work or "over and above work" issued assured SWM of making a profit, a perception of fair play and trust, etc. Whatever the case, the ELLIOT SRA contract proceeded with minimal disagreements between SWM and SUPSHIP San Diego. [Ref. 8:1]

The "over and above work" provisions provided a vehicle for SWM to supply a COPA for each IDR that requested growth work. The SUPSHIP San Diego Project Manager for the ELLIOT SRA contract believes this was beneficial in that it reduced the number of IDRs submitted by SWM and more clearly defined SWM's recommendation of additional repairs. [Ref. 11:1]

Initially, the SUPSHIP San Diego ACO, Project Manager, Surveyors, etc. had a hard time with the change in routine as a result of incorporating the DFARS "over and above work" provisions into the ELLIOT SRA contract. But once they had time to think about and absorb the realities of the provisions, they realized the change was minimal and required very little adaptation to the normal way they did business. [Ref. 8:3]

During the ELLIOT SRA, SWM experienced no significant problems with the use of the "over and above work" contract provisions. However, use of these provisions did cause SWM to experience a marked increase in clerical work in the Contracts Department. This SRA was a relatively short one, with a moderate amount of basic work. Had this been an extended SRA of several months, SWM most likely would have assigned additional personnel to handle the anticipated heavy change order request work load, which would increase the overhead cost. [Ref. 12:1]

All things considered, SWM's Senior Vice President for Contracts, Material, and Environmental felt that the use of the "over and above work" provisions in the ELLIOT SRA contract was beneficial to both parties. Its use served to enhance the communications between the parties and invoked a steadier uninterrupted flow of work than usual on this type of contract. SWM believes that the key to the successful use of the "over and above work" provisions in the ELLIOT SRA contract, and any future contracts, is the ability of both parties to provide on-site staff personnel that can

communicate effectively, use reason at all times and work closely to resolve problems that may arise to the mutual benefit of both parties. [Ref. 12:2]

Negative feedback from the SUPSHIP ACO included comments questioning the need to go out with a unilateral Supplemental Agreement to increase funding to the "over and above work" CLINs in Section B of the contract. The SUPSHIP ACO suggested increasing funding to the "over and above work" CLINs in Section B of the contract be done in-house SUPSHIP San Diego via a memo between Codes 600, 700, and 400 without putting the contractor on notice that additional funding has been added to the "over and above work" CLINs. This would cut down on the number of administrative Supplemental Agreements issued. The SUPSHIP San Diego ACO stated that it is hard to believe that, if the contractor knows how much the "over and above work" CLIN funding is being increased by, the contractor will not go for all of the "over and above work" CLIN funding increase. In addition, the SUPSHIP San Diego ACO stated that it is hard to believe that the contractor does not realize the "over and above work" CLIN funding increase is due to a growth modification or that it does not influence the contractor's estimating or negotiating. Also, the SUPSHIP San Diego ACO questioned the internal SUPSHIP San Diego procedures used to notify the SUPSHIP San Diego accounting technician of increases or decreases to the basic contract package and "over and above work" CLINs. [Ref. 8:2]

Perhaps the single most notable effect of incorporating the DFARS "over and above work" provisions into the ELLIOT SRA contract is the significant decrease in the amount of time it takes from the submittal of the IDR by the contractor to the issuance of a modification by the Government. In previous contracts, it took two weeks to a month from the time the contractor submitted the IDR to the time the modification was negotiated. In the ELLIOT SRA contract, it took only a couple of days from the time SWM submitted the IDR to the time the modification was negotiated. One interviewee stated that it was possible to review the IDR and COPA, get an independent Government estimate, and negotiate a settlement with the contractor in one day. Another interviewee acknowledged that, in previous contracts, some growth work or "over and above work"

started before the ACO authorized the contractor to proceed or before the modification was issued so that the work could be completed by the contract schedule completion date, since it usually took thirty days or so from the time the contractor submitted the IDR to the time the modification was negotiated. Since it took two or three days from the time SWM submitted the IDR to the time the modification was negotiated in the ELLIOT SRA contract, it appears that the incorporation of the DFARS "over and above work" provisions into ship repair contracts can significantly reduce, if not eliminate, the amount of "unauthorized" growth work or "over and above work." These are tremendous benefits as a result of incorporating the DFARS "over and above work" provisions into ship repair contracts.

However, incorporating the DFARS "over and above work" provisions into the ELLIOT SRA contract on a fixed-price basis, where the basic work and the "over and above work" were fixed-price, did not completely address the original issue SUPSHIP San Diego is trying to resolve, which is finding a tool that facilitates D & D negotiations. Although the time from submittal of the IDR by the contractor to negotiation of the modification was reduced significantly, the COPA submitted by SWM included D & D as a cost element in the "over and above work" price proposal. Thus, D & D continued to be a proposal cost element that needed to be negotiated in order for the Government and the contractor to successfully negotiate the "over and above work" modification.

One of the major reasons why SUPSHIP San Diego and SWM did not experience any significant problems with the incorporation of the DFARS "over and above work" provisions into the ELLIOT SRA contract is that there was a good working relationship between the Government and contractor personnel involved with the daily administration of the contract. It would be interesting to see how the use of the DFARS "over and above work" provisions in a ship repair contract would turn out if the Government and contractor personnel involved with the daily administration of the contract did not have a good working relationship and could not successfully negotiate the "over and above work" modifications.

Interested parties involved in ship repair contracts are cautioned, however, that, just because the incorporation of the DFARS "over and above work" provisions into the ELLIOT SRA contract went well, assessing the value of incorporating the DFARS "over and above work" provisions into ship repair contracts after just one local test may result in a limited and less than accurate assessment. Interested parties involved in ship repair contracts need to be aware that there may be difficulties, impediments, and issues not discovered or realized in this first local test of incorporating the DFARS "over and above work" provisions into a ship repair contract. The second SUPSHIP San Diego local test incorporation of the DFARS "over and above work" provisions into the USS PELELIU (LHA-5) SRA contract currently being performed at SWM will provide additional information that should be useful in assessing the value of incorporating the DFARS "over and above work" provisions into ship repair contracts.

Looking at the DFARS "over and above work" provisions as a whole, there is little difference in approach, principle, or manner to the way other fixed-price ship repair contracts are administered. The researcher notes, however, that the mere suggestion of doing something different than the usual way of doing things tends to generate resistance, which hinders acceptance and turns something simple into something difficult.

E. ANALYSIS OF THE "OVER AND ABOVE WORK" CONCEPT AND THE ISSUE OF SHIP REPAIR CONTRACTORS RECOVERING LOSSES THROUGH CONTRACT MODIFICATIONS

The 1990 GAO report to the House of Representatives Armed Services Committee stated that the laws and regulations at that time provided no basis to exclude an otherwise technically acceptable, responsible contractor from a competition solely on the basis that the contractor submitted an excessively low contract price proposal. The 1990 GAO report also stated that, if it can be determined that the contractor can sustain the loss and is otherwise responsible, the Navy must award the ship repair contract. The 1990 GAO report stated, however, that the regulations caution the Contracting Officer to take appropriate action to ensure that losses on FFP ship repair contracts are not

recovered by the contractor through the pricing of change orders or contract modifications.

The DFARS "over and above work" provisions are a tool available for the Contracting Officer to use to help ensure that contractors do not recover losses as a result of submitting excessively low FFP ship repair contract bids. Incorporating the DFARS "over and above work" provisions into ship repair contracts, where the "over and above work" contract line item is cost-reimbursable with no fee, will help ensure that the contractor does not recover losses on the FFP basic contract package through the pricing of "over and above work." With the "over and above work" cost-reimbursable with no fee for the contractor, the contractor will only be reimbursed for the allowable, reasonable, and allocable costs incurred in performing the "over and above work." Thus, the contractor will not be able to receive any fee on the "over and above work" to offset the losses incurred as a result of a low-ball FFP bid on the basic contract package. This will force the contractor to submit more realistic FFP ship repair contract bids. This may also keep the contractor from searching for every possible need for "over and above work" in order to get well. Thus, the contractor will only propose "over and above work" that is truly needed in order to complete the contract. As a result, the cost growth and schedule overruns experienced by ship repair contracts will be reduced.

If the DFARS "over and above work" provisions had been incorporated into the ELLIOT SRA contract with the "over and above work" contract line item cost-reimbursable with no fee and the basic package fixed-price, SWM and the other offerors may have submitted higher bids for the contract. Contractors are motivated by profit. Thus, SWM and the other offerors would normally submit more realistic bids for the contract since they would not receive any fee to offset the losses incurred as a result of a low-ball FFP bid on the basic contract package.

However, it is possible that SWM and the other offerors would not have changed their bids for the contract since this would have been the first "hybrid" contract awarded by SUPSHIP San Diego and if SWM and the other offerors believed that they could sustain the losses that might be incurred on the contract. But since contractors need to

make profits in the long-run in order to stay in business and to satisfy shareholders, SWM and the other offerors would eventually have to start submitting more realistic FFP bids instead of low-ball FFP bids for ship repair contracts.

There is an issue that Contracting Officers may need to address in the future if a "hybrid" contract type, with the "over and above work" contract line item cost-reimbursable with no fee and the basic package fixed-price, is used to incorporate the DFARS "over and above work" provisions into ship repair contracts. Contractors may not be willing to submit bids for a ship repair contract if the amount of "over and above work," or growth work, being experienced on contracts is a significant percentage of the amount of the basic package work. Since contractors would receive no fee on the "over and above work," contractors would realize a lower profit rate on the total contract work because the amount of profit received would not increase as the amount of total contract work increased. Contractors and their shareholders usually have a minimum return on investment threshold that is expected to be achieved. Thus, Contracting Officers may need to be prepared to somehow address the issue of contractors receiving lower realized profit rates on the total contract work if the amount of "over and above work" experienced on ship repair contracts is a significant percentage of the amount of the basic package work.

In addition, contractors may start challenging that the "over and above work" is not growth work, but instead is new work, which the contractors would argue should be added to the basic contract on a FFP basis with profit. This may result in increased disputes and litigation between the contractors and the Government, resulting in increased workload, delayed contract closeout, and a deteriorated working relationship between the contractors and the Government.

One SWM interviewee stated that there is a much better working relationship between SWM and SUPSHIP San Diego contract administration personnel, including surveyors, on their cost type phased maintenance contracts, which are not under the FFP MSRA requirements, than with the FFP MSRA ship repair contracts. The interviewee stated that there is much less antagonism in negotiating modifications to these cost type

phased maintenance contracts. One reason why there would be less antagonism, especially on SWM's part, is that the Government assumes the risk of contracts and SWM is assured of being reimbursed for the allowable, reasonable, and allocable costs incurred in performing the contract work plus fee. Thus, there may be less antagonism in negotiating modifications for "over and above work" if a "hybrid" contract type was used to incorporate the DFARS "over and above work" provisions into the MSRA ship repair contracts.

Using a "hybrid" contract type, with the "over and above work" contract line item cost-reimbursable with no fee and the basic package fixed-price, to incorporate the DFARS "over and above work" provisions into the ELLIOT SRA contract would not have changed the administrative procedures used to implement the "over and above work" provisions nor the results of the contract. The contractor would still have identified needed repairs and recommended corrective action by submitting IDRs. The contractor would still have submitted COPAs with which to negotiate cost-reimbursement with no fee contract modifications. Thus, the use of the administrative procedures to implement the "over and above work" provisions would still have resulted in a significant decrease in the amount of time it takes from the submittal of the IDR by the contractor to the issuance of a modification by the Government.

In addition, the contractor would have been able to segregate and track costs between the fixed-price work and the cost type work since the contractor already uses an accounting system to track cost on its cost type phased maintenance contracts. However, the use of a "hybrid" contract type would have extended contract closeout since the actual incurred "over and above work" costs submitted by the contractor would have been subject to review and verification by the DCAA.

Incorporating the DFARS "over and above work" provisions into ship repair contracts on a fixed-price basis will not help ensure that the contractor does not recover losses on the FFP basic contract package through the pricing of "over and above work." With the "over and above work" fixed-price, the contractor will be paid a negotiated amount for the "over and above work" to be performed. The negotiated amount will be

for estimated labor, material, overhead, subcontractor, and other direct costs and will also include profit for the "over and above work." Thus, the contractor will be able to receive profit on the "over and above work" to offset the losses incurred as a result of a low-ball FFP bid on the basic contract package. This will not force the contractor to submit more realistic FFP ship repair contract bids. This will incentivize the contractor to find every possible need for "over and above work" and to be uncompromising in negotiating the FFP of the "over and above work" in order to get well. As a result, ship repair contracts will continue to experience cost growth and schedule overruns.

Since DFARS 217.7101(b) defines MSRA contracts as fixed-price, incorporating the DFARS "over and above work" provisions into ship repair contracts, with the "over and above work" contract line item cost-reimbursable with no fee, will require that a deviation be processed through the DAR Council to incorporate cost type language into the agreements. Processing a deviation through the DAR Council should be done if using a "hybrid" contract type, with the basic package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable with no fee, makes sense. The analysis of the local test incorporation of the DFARS "over and above work" provisions into the ELLIOT SRA contract and the analysis of the "over and above work" concept and the issue of ship repair contractors recovering losses through contract modifications indicate that using a "hybrid" contract type makes sense, at least enough sense to allow SUPSHIP San Diego to use a "hybrid" contract type in a local test incorporation of the DFARS "over and above work" provisions.

F. SUMMARY

This chapter presented how SUPSHIP San Diego incorporated the DFARS "over and above work" provisions as a local test in the ELLIOT SRA contract. This chapter also presented the internal SUPSHIP San Diego "over and above work" procedures used during the ELLIOT SRA contract. This chapter identified and provided an analysis of the test results, the lessons learned, and the positive and negative feedback from Government and contractor personnel involved with the ELLIOT SRA contract. In addition, this

chapter provided an analysis of the "over and above work" concept and the issue of ship repair contractors recovering losses through contract modifications. The next chapter presents the conclusions and recommendations of this thesis.

V. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

The purpose of this chapter is to present the conclusions and recommendations of this thesis. This chapter also presents brief answers to the research questions. In addition, this chapter identifies suggested areas for further research.

B. CONCLUSIONS

(1) Based on the local test results of the ELLIOT SRA contract, it appears that the incorporation of the DFARS "over and above work" provisions can be an effective method to negotiate modifications in the acquisition of "over and above work" in ship repair contracts. The single most notable effect of incorporating the DFARS "over and above work" provisions in the ELLIOT SRA contract was the significant decrease in the time it took from the submittal of the IDR to the issuance of the modification. However, one needs to keep in mind that this was just one local test of the DFARS "over and above work" provisions in a ship repair contract and that both parties were able to work closely and effectively together. Incorporating the DFARS "over and above work" provisions into ship repair contracts may not necessarily, therefore, be for all SUPSHIP offices an effective method to negotiate "over and above work" modifications.

(2) Any problems with the use of the DFARS "over and above work" provisions encountered during the ELLIOT SRA contract were minor in nature and, with continued use of these provisions, should be easily resolved. Both SUPSHIP San Diego and SWM can benefit from this local test and can be better prepared to ensure the successful completion of future ship repair contracts which incorporate the DFARS "over and above work" provisions.

(3) When the DFARS "over and above work" provisions are looked at as a whole, there is very little difference in approach, principle, or manner to the way any other fixed-price ship repair contract is administered. However, the suggestion of doing something

different than the usual way of doing business tends to generate resistance, which hampers acceptance and can turn something simple into something difficult.

(4) Incorporating the DFARS "over and above work" provisions into the ELLIOT SRA contract on a fixed-price basis did not completely resolve the issue of SUPSHIP San Diego finding a tool that facilitates D & D negotiations. Although the time from submittal of the IDR by SWM to negotiation of the modification was reduced significantly, D & D continued to be a proposal cost element that needed to be negotiated in order for SUPSHIP San Diego and SWM to successfully negotiate the "over and above work" modification.

(5) Using a "hybrid" contract type to incorporate the DFARS "over and above work" provisions into ship repair contracts, with the basic contract package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable with no fee, will help Contracting Officers ensure that contractors do not recover losses on FFP contracts through the pricing of change orders or contract modifications. Contractors will only be reimbursed for the allowable, reasonable, and allocable costs incurred in performing the "over and above work." Contractors will not be able to receive any fee on the "over and above work" to offset the losses incurred as a result of a low-ball FFP bid on the basic contract package.

C. RECOMMENDATIONS

(1) SUPSHIP San Diego incorporate the lessons learned from the local test results of the ELLIOT SRA and the PELELIU SRA contracts in future ship repair contracts that incorporate the DFARS "over and above work" provisions.

(2) SUPSHIP San Diego hold meetings after future contract awards between the SUPSHIP ACO, the SUPSHIP Project Management team, and the contractor's project management and contracting personnel to enable the SUPSHIP ACO to explain and clarify the contract's "over and above work" provisions.

(3) SUPSHIP San Diego inform NAVSEA 028 and all of the other SUPSHIP offices of the local test results, lessons learned, and positive and negative feedback from

Government and contractor personnel involved with the ELLIOT SRA and the PELELIU SRA contracts.

(4) NAVSEA 028, with the local test results of the ELLIOT SRA and the PELELIU SRA contracts in hand, request and obtain a deviation from the DAR Council to incorporate cost type language into the MSRAs.

(5) NAVSEA 028 allow local testing of a "hybrid" contract type, with the basic contract package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable with no fee.

(6) NAVSEA 028, if local testing of a "hybrid" contract type is successful, develop policy concerning "hybrid" contract types for ship repair.

D. ANSWERS TO THE RESEARCH QUESTIONS

Brief answers to the research questions are presented in this section.

The primary research question was as follows:

How should the DFARS "over and above work" provisions be incorporated into ship repair contracts?

To fully optimize the utility of the "over and above work" concept, a "hybrid" contract type should be used to incorporate the DFARS "over and above work" provisions into ship repair contracts, with the basic contract package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable with no fee.

The subsidiary research questions were as follows:

(1) What is "over and above work?"

"Over and above work" is also known as growth work or emergent work. It is work discovered during the performance of the contract that is within the general scope of the contract, but not covered by the line item(s) for the basic contract work, and is necessary to be performed in order to satisfactorily complete the overhaul, maintenance, or repair contract.

(2) To what extent is "over and above work" discovered during ship repair contract performance?

The extent of "over and above work" varies from one SUPSHIP office to another, from one year to another, and from one ship repair contract to another. Some SUPSHIP offices experience little or no growth work, or "over and above work," while other SUPSHIP offices experience growth work as much as 100 percent above the contract award price. From FY 1985 to FY 1993, the percentage of growth work above the contract award price for selected CNO availabilities at SUPSHIP San Diego ranged from an average low of seventeen percent to an average high of ninety-nine percent.

(3) What are the significant benefits in using the "over and above work" provisions in ship repair contracts?

The single most notable effect of incorporating the DFARS "over and above work" provisions into the ELLIOT SRA contract is the significant decrease in the amount of time it takes from the submittal of the IDR by the contractor to the issuance of a modification by the Government. Since it is possible to review the IDR and COPA, get an independent Government estimate, and negotiate a settlement with the contractor in as little as one to three days, the amount of "unauthorized" growth work, or "over and above work" started before the ACO authorizes the contractor to proceed or before the modification is issued, will be significantly reduced, if not eliminated.

Using a "hybrid" contract type to incorporate the DFARS "over and above work" provisions into ship repair contracts, with the basic contract package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable with no fee, will facilitate D & D negotiations since D & D is not an issue in a cost type contract environment. Using a "hybrid" contract type will also force the contractor to submit more realistic FFP ship repair contract bids since the contractor will not be able to receive any fee on the "over and above work" to offset the losses incurred as a result of a low-ball FFP bid on the basic contract package. This may also keep the contractor from searching for every possible need for "over and above work" in order to get well. Thus, the contractor will only propose "over and above work" that is truly needed in order to complete the contract. As a result, the cost growth and schedule overruns experienced by ship repair contracts will be reduced.

(4) What are the significant problems in using the "over and above work" provisions in ship repair contracts?

Any problems with the use of the DFARS "over and above work" provisions encountered during the ELLIOT SRA contract were minor in nature. Initially, SUPSHIP San Diego personnel had a hard time with the change in routine. But once they had time to think about and absorb the realities of the provisions, they realized the change was minimal and required very little adaptation to the normal way they did business.

(5) How is "over and above work" currently being addressed in ship repair contracts?

The MSC has approval to use its Additional Requirements Clause as an alternative to using the DFARS "Over and Above Work" Clause at 252.217-7028. Most SUPSHIP offices use the Changes Clause at 252.217-7003 to get "over and above work" negotiated into the contract as a growth item, with each SUPSHIP office having its own particular procedural and documentation requirements.

(6) What modifications should be made to the DFARS "over and above work" provisions?

The DFARS "over and above work" provisions should be modified to allow the use of a "hybrid" contract type to incorporate the provisions into ship repair contracts, with the basic contract package solicited and awarded fixed-price and the "over and above work" contract line item cost-reimbursable with no fee.

E. AREAS FOR FURTHER RESEARCH

The following are suggested areas for further research:

(1). Cost growth and schedule overrun problems experienced at private and public shipyards since FY 1989.

(2). The appropriate contract type for ship repair contracts.

(3). The impact of The Federal Acquisition Streamlining Act of 1994 on the solicitation, awarding, performance, and administration of ship repair contracts.

F. SUMMARY

This chapter presented the conclusions and recommendations of this thesis. This chapter also presented brief answers to the research questions. In addition, this chapter identified suggested areas for further research.

APPENDIX A. ACRONYMS

ABR	Agreement for Boat Repair
ACO	Administrative Contracting Officer
CLIN	Contract Line Item Number
CNO	Chief of Naval Operations
COPA	Change Order Price Analysis
COTR	Contracting Officer's Technical Representative
D & D	Delay and Disruption
DAR Council	Defense Acquisition Regulatory Council
DCAA	Defense Contract Audit Agency
DFARS	Defense Federal Acquisition Regulation Supplement
DLA	Defense Logistics Agency
DOD	Department of Defense
DSRA	Drydock Selected Restricted Availability
FFP	Firm-Fixed-Price
FY	Fiscal Year
G&A	General and Administrative
GAO	General Accounting Office
GCA	Government and Contract Affairs
IDR	Inspection Deficiency Report
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSC	Military Sealift Command
MSRA	Master Ship Repair Agreement
NASSCO	National Steel and Shipbuilding Company
NAVSEA	Naval Sea Systems Command
OGC	Office of General Counsel
SDSRA	San Diego Ship Repair Association
SF	Standard Form
SOW	Statement of Work
SRA	Selected Restricted Availability
SUPSHIP	Supervisor of Shipbuilding, Conversion and Repair
SWM	Southwest Marine, Inc.
UCA	Undefinitized Contractual Action
WKP 500	Work in Progress Report

APPENDIX B. DFARS SUBPART 217.77--OVER AND ABOVE WORK

217.7700 Scope of subpart.

This subpart prescribes policies and procedures for acquisition of over and above work.

217.7701 Procedures.

- (a) Contracts for the performance of maintenance, overhaul, modification, and repair of various items (e.g., aircraft, engines, ground support equipment, ships) generally contain over and above work requirements. When they do, the contracting officer shall establish a separate contract line item for the over and above work.
- (b) Over and above requirements task the contractor to identify needed repairs and recommend corrective action during contract performance. The contractor submits a work request to identify the over and above work and, as appropriate, the Government authorizes the contractor to proceed.
- (c) The clause at 252.217-7028, Over and Above Work, requires the contractor and the contracting officer responsible for administering the contract to negotiate specific procedures for Government administration and contractor performance of over and above work requests.
- (d) The contracting officer may issue a blanket work request authorization describing the manner in which individual over and above work requests will be administered and setting forth a dollar limitation for all over and above work under the contract. The blanket work request authorization may be in the form of a letter or contract modification (Standard Form 30).
- (e) Over and above work requests are within the scope of the contract. Therefore, procedures in Subpart 217.74, Unfinitized Contractual Actions, do not apply.
- (f) To the maximum extent practical, over and above work shall be negotiated prior to performance of the work.

217.7702 Contract clause.

Use the clause at 252.217-7028, Over and Above Work, in solicitations and contracts containing requirements for over and above work, except as provided for in Subpart 217.71.

Source: [Ref. 3:217.77-1]

APPENDIX C. DFARS 252.217-7028 OVER AND ABOVE WORK

As prescribed in 217.7702, use a clause substantially as follows:

OVER AND ABOVE WORK (DEC 1991)

(a) Definitions.

As used in this clause--

(1) "Over and above work" means work discovered during the course of performing overhaul, maintenance, and repair efforts that is--

- (i) Within the general scope of the contract;
- (ii) Not covered by the line item(s) for the basic work under the contract; and
- (iii) Necessary in order to satisfactorily complete the contract.

(2) "Work request" means a document prepared by the Contractor which describes over and above work being proposed.

(b) The Contractor and Administrative Contracting Officer shall mutually agree to procedures for Government administration and Contractor performance of over and above work requests. If the parties cannot agree upon the procedures, the Administrative Contracting Officer has the unilateral right to direct the over and above work procedures to be followed. These procedures shall, as a minimum, cover--

(1) The format, content, and submission of work requests by the Contractor. Work requests shall contain data on the type of discrepancy disclosed, the specific location of the discrepancy, and the estimated labor hours and material required to correct the discrepancy. Data shall be sufficient to satisfy contract requirements and obtain the authorization of the Contracting Officer to perform the proposed work;

(2) Government review, verification, and authorization of the work; and

(3) Proposal pricing, submission, negotiation, and definitization.

(c) Upon discovery of the need for over and above work, the Contractor shall prepare and furnish to the Government a work request in accordance with the agreed-to procedures.

(d) The Government shall--

(1) Promptly review the work request;

(2) Verify that the proposed work is required and not covered under the basic contract line item(s);

(3) Verify that the proposed corrective action is appropriate; and

(4) Authorize over and above work as necessary.

(e) The Contractor shall promptly submit to the Contracting Officer a proposal for the over and above work. The Government and Contractor will then negotiate a settlement for the over and above work. Contract modifications will be executed to definitize all over and above work.

(f) Failure to agree on the price of over and above work shall be a dispute within the meaning of the Disputes clause of this contract.

(End of clause)

Source: [Ref. 5:252.217-25 and 26]

APPENDIX D. MSC 5252.217-9801 ADDITIONAL REQUIREMENTS (JAN 1991)

(a)

(1) The Contractor shall schedule the performance of all items of the work package, including the Category B Items set forth in CLIN 0002 and the Contractor Price Breakdown, so as to permit up to a total of (e.g., **90,000**) direct production (both prime and subcontractor) manhours of work to be performed as "Additional Requirements" (including supplemental, emergent and new work). The contractor agrees that these Additional Requirements manhours, if ordered, shall be performed concurrently with the aforementioned work items, during the contract period of performance, without impacting, accelerating, or causing delay or disruption to the work required by the aforementioned work items, to any other Government contract, or to any other work in progress for the Government.

(2) The "Additional Requirements," if required, shall be ordered during the contract period of performance, as may be modified, on the following schedule:

(i) No more than 75% of the hours during the second quarter of the contract availability.

(ii) No more than 50% of the hours during the third quarter of the contract availability.

(iii) No more than 30% of the hours during the fourth quarter of the contract availability.

(iv) No more than 20% of the hours during the (e.g., last twenty days) of shipyard availability through and including the day of redelivery of the vessel by the shipyard, as such date may be extended by contract modification.

(b) Whenever the Government orders Additional Requirements pursuant to this clause, the contractor shall submit a price proposal for such work. This proposal shall be submitted within three days of the receipt of the government's request for a proposal, or within such additional time provided in writing by the Contracting Officer. The contractor's failure to submit its proposal within the three days, or such extended period of time, may be considered a failure of the parties to negotiate a fair and reasonable price for the "Additional Requirements" and will permit the Contracting Officer to take any of the three options set forth in subparagraph (c) below. "Additional Requirements" proposals shall be priced using the fully loaded rate set forth in Section B, CLIN 0005. The Contractor shall indicate the fully loaded manhour labor rate (including profit, G&A, QA, supervision, support functions, and all indirect charges). This rate will be used in evaluating the Contractor's proposal and also will be used for negotiating changes as required by this clause. The contractor agrees that the number of man hours included in its price proposal for such Additional Requirements shall include only direct production manhours. For these purposes, direct production manhours (both prime and subcontractor) are for skilled labor at the journeyman level expended in direct production as exemplified by the following functions:

Abrasive cleaning/blasting	Tank cleaning
Welding	Machinists (inside and outside)
Burning	Brazing
Carpentry	Electrical Work
Electronic Work	Shipfitting
Lagging	Painting
Boilermaking	Pipefitting
Sheetmetal Work	Engineering
Rigging	Staging/scaffolding
General Labor	Fire Watch

Direct production manhours will not include those functions (whether charged directly or indirectly by the offeror's accounting system) which are herein defined as support for production functions. Necessary support functions shall be considered to be included in the offeror's fully burdened rate for direct production manhours. Examples of support functions include:

Testing	Quality Assurance
Planning	Cleaning (except tank cleaning)
Material Handling &	Security
Warehousing	Administration
Surveying	Purchasing staff
Transportation	Lofting
Supervision	Other indirect support

Material costs will not be included in the "Additional Requirements" direct production manhour rate. Material costs and profit for material costs shall be proposed as part of the contractor's proposal if "Additional Requirements" are ordered.

(c) Upon receipt of the Contractor's price proposal for the "Additional Requirements" the Contractor and the Contracting Officer shall negotiate the scope of the effort. If a fair and reasonable price cannot be negotiated between the Contractor and the Contracting Officer, the Contracting Officer reserves the right to:

- (1) Have the work performed by the Government;
- (2) Conduct a separate competitive procurement for the "Additional Requirements," resulting in the award of a contract which may be performed during the original period of performance of this contract;
- (3) Defer the work to a designated post-overhaul repair period which will be the subject of a separate procurement.

In cases of (1) and (2) above, Government personnel and/or other contractor personnel may perform the "Additional Requirements" during the performance period of this contract at the initial prime contractor's facility pursuant to the "Access to Vessels" clause.

(d)

- (1) The Contractor warrants and hereby certifies that its price for the firm fixed portion of this Contract (CLINs 0001, 0001AA, 0002, 0003, 0006, and 0007) does not include any amount for the "Additional Requirements" (CLIN 0005).

"Additional Requirements" (CLIN 0005), if any, will be added by supplemental agreement, contract modification, or change order.

(2) It is recognized, however, that, should the Government elect to pursue the options outlined in subparagraph (c) (1) and (2) above, the presence of the Government or another contractor may delay, disrupt or otherwise adversely impact upon the performance of this Contract. Consequently, the contractor's price for the firm fixed price portion of the Contract (CLINs 0001, 0001AA, 0002, 0003, 0006, and 0007) will be deemed to include all costs, if any, of supporting one or more third parties (including Government employees and/or other contractor's workers) at the overhaul site in performance of "Additional Requirements," should the Government elect to pursue such a course. Increased costs that may result from third party presence as described above, may include, but are not limited to: insurance; physical plant security; reasonable access for third party workers who must transit the contractor's facility or any other work site provided by the contractor at which the ship may be berthed; utilities used aboard the ship or in proximity of the ship in support of the overhaul; and similar requirements. Third party presence will occur only if the prime ship repair contractor and the Government cannot agree upon a fair and reasonable price. The Contractor should be guided in determining the costs, if any, of supporting such third party presence in its price proposal for CLINs 0001, 0001AA, 0002, 0003, 0006, and 0007 based on a risk assessment relative to the probability of proposing fair and reasonable prices versus reaching a potential impasse with the Government which would precipitate third party presence.

(3) The Contractor knowingly and voluntarily waives all claims against the Government and/or other third party contractors for delay, disruption, loss of efficiency, or other impact arising out of or based upon the presence of Government or other contractor employees performing the "Additional Requirements" at this contractor's facility. Furthermore, in cases described in subparagraphs (c) (1) and (2) above, the Contractor waives any right to claims of interference under the "Access to Vessels" clause.

(e) The contractor agrees that its manhour rate for the (e.g., **90,000**) manhours of "Additional Requirements" includes the complete and full compensation to which it is entitled, including, but not limited to, compensation for all the direct labor costs, (e.g., straight time, overtime, premium time, shift differential, holiday time, standby time, etc.) for performing the Additional Requirements, as well as compensation for acceleration, delay and disruption and other impact, if any, to the aforementioned work items, to work performed under any other Government contract and to any other work in progress for the Government. The contractor further agrees that it is not entitled to a time extension to the delivery date of any ship under a Government contract by reason of or as a result of the ordering of (e.g., **90,000**) manhours of "Additional Requirements."

(f) "Additional Requirements" does not include work performed pursuant to the clauses of this Contract entitled "Inspection of Supplies and Services," "Guarantees," or other contract provisions relating to the corrections of defects.

(g) The cost to the Government of "Additional Requirements" work performed by subcontractors shall not exceed the cost per direct production manhour for work required by CLIN 0005.

(h) The contractor agrees that the Government's rights under this clause are in addition to and do not abrogate its rights under the Changes Clause.

Source: [Ref. 14:5-9]

APPENDIX E. DFARS 252.217-7003 CHANGES

As prescribed in 217.7104(a), use the following clause:

CHANGES (DEC 1991)

(a) The Contracting Officer may, at any time and without notice to the sureties, by written change order, make changes within the general scope of any job order issued under the Master Agreement in--

- (1) Drawings, designs, plans, and specifications;
- (2) Work itemized;
- (3) Place of performance of the work;
- (4) Time of commencement or completion of the work; and
- (5) Any other requirement of the job order.

(b) If a change causes an increase or decrease in the cost of, or time required for, performance of the job order, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the price or date of completion, or both, and shall modify the job order in writing.

(1) Within ten days after the Contractor receives notification of the change, the Contractor shall submit to the Contracting Officer a request for price adjustment, together with a written estimate of the increased cost.

(2) The Contracting Officer may grant an extension of this period if the Contractor requests it within the ten day period.

(3) If the circumstances justify it, the Contracting Officer may accept and grant a request for equitable adjustment at any later time prior to final payment under the job order, except that the Contractor may not receive profit on a payment under a late request.

(c) If the Contractor includes in its claim the cost of property made obsolete or excess as a result of a change, the Contracting Officer shall have the right to prescribe the manner of disposition of that property.

(d) Failure to agree to any adjustment shall be a dispute within the meaning of the Disputes clause.

(e) Nothing in this clause shall excuse the Contractor from proceeding with the job order as changed.

(End of clause)

Source: [Ref. 4:252.217-3 and 4]

**APPENDIX F. SUPSHIP SAN DIEGO FY 1985 TO FY 1994
GOVERNMENT ESTIMATE, CONTRACT AWARD PRICE, FINAL
CONTRACT COST, AND GROWTH WORK DATA FOR SELECTED
CNO AVAILABILITIES.**

FY	1985	1986	1987
No. of Contracts	11	12	26
Govt. Estimate			
FY Total	\$106,841,489	\$42,070,346	\$84,453,422
FY Avg.	9,712,863	3,505,862	3,248,209
Contract Award Price			
FY Total	50,085,748	25,752,989	75,706,816
FY Avg.	4,553,250	2,146,082	2,911,801
Govt. Estimate Exceeds Contract Award Price			
FY Total	56,755,741	16,317,357	8,746,606
FY Avg.	5,159,613	1,359,780	336,408
Ratio of Avg. Contract Award Price to Govt. Estimate	47%	61%	90%
Percent That Avg. Contract Award Price is Below Govt. Estimate	53%	39%	10%
Final Contract Costs			
FY Total	99,911,776	30,086,636	88,801,959
FY Avg.	9,082,889	2,507,220	3,415,460
Contract Growth			
FY Total	49,826,028	4,333,647	13,095,143
FY Avg.	4,529,639	361,137	503,659
Percent of Growth Work Above Contract Award Price	99%	17%	17%

FY	1988	1989	1990
No. of Contracts	16	19	22
Govt. Estimate			
FY Total	\$54,136,076	\$66,931,598	\$81,859,546
FY Avg.	3,383,505	3,522,716	3,720,888
Contract Award Price			
FY Total	49,328,716	62,186,181	71,378,608
FY Avg.	3,083,045	3,272,957	3,244,482
Govt. Estimate Exceeds			
Contract Award Price			
FY Total	4,807,360	4,745,417	10,480,938
FY Avg.	300,460	249,759	476,406
Ratio of Avg. Contract			
Award Price to Govt.			
Estimate	91%	93%	87%
Percent That Avg. Contract			
Award Price is Below Govt.			
Estimate	9%	7%	13%
Final Contract Costs			
FY Total	63,482,902	81,431,296	88,795,724
FY Avg.	3,967,681	4,285,858	4,036,169
Contract Growth			
FY Total	14,064,236	19,245,115	17,417,116
FY Avg.	879,015	1,012,901	791,687
Percent of Growth Work			
Above Contract Award			
Price	29%	31%	24%

FY	1991	1992	1993
No. of Contracts	23	37	13
Govt. Estimate			
FY Total	\$57,195,282	\$144,194,710	\$50,965,469
FY Avg.	2,486,751	3,897,154	3,920,421
Contract Award Price			
FY Total	42,279,166	108,257,971	32,018,621
FY Avg.	1,838,225	2,925,891	2,462,971
Govt. Estimate Exceeds			
Contract Award Price			
FY Total	14,916,116	35,936,739	18,946,848
FY Avg.	648,527	971,263	1,457,450
Ratio of Avg. Contract			
Award Price to Govt.			
Estimate	74%	75%	63%
Percent That Avg. Contract			
Award Price is Below Govt.			
Estimate	26%	25%	37%
Final Contract Costs			
FY Total	58,228,139	156,600,709	46,354,209
FY Avg.	2,531,658	4,232,452	3,565,708
Contract Growth			
FY Total	15,948,973	48,342,738	14,335,588
FY Avg.	693,434	1,306,560	1,102,738
Percent of Growth Work			
Above Contract Award			
Price	38%	45%	45%

FY	1994
No. of Contracts	20
Govt. Estimate	
FY Total	\$69,646,587
FY Avg.	3,482,329
Contract Award Price	
FY Total	41,413,134
FY Avg.	2,070,657
Govt. Estimate Exceeds	
Contract Award Price	
FY Total	28,233,453
FY Avg.	1,411,673
Ratio of Avg. Contract	
Award Price to Govt.	
Estimate	59%
Percent That Avg. Contract	
Award Price is Below Govt.	
Estimate	41%

Source: [Ref. 18]

APPENDIX G. ELLIOT SRA CONTRACT "OVER AND ABOVE WORK" PROVISIONS

C-28 OVER AND ABOVE WORK

(1) This over and above item is for the purpose of covering work which is required to be performed under other CLINs of this contract but which is not included within the scope and prices of those CLINs. The Contractor is tasked with identifying needed repairs and recommending corrective action during contract performance for those deficiencies discovered which are not covered by the basic contract or subsequent contract modifications (supplemental agreements). Needed repairs and corrective action to be considered under this provision will be submitted to the Government in the form of an Inspection Deficiency Report (IDR); also known as a "Work Request" within the meaning of the clause of this contract entitled "Over and Above Work" (DFARS 252.217-7028). It is anticipated that the estimated costs for these series of related changes will exceed \$100,000. Therefore, the provisions of FAR 52.243-6, Change Order Accounting, are hereby invoked.

(2) The following provisions apply to "Over and Above Work Orders:"

(a) General. Orders for supplies or services may be issued by the ACO at any time during the contract period, including any extension thereof. Any amounts shown in Section B for over and above work are estimated amounts only and are subject to upward or downward adjustment by the ACO. It is understood and agreed that the Government has no obligation under this contract to issue any orders.

(b) Memorandum of Agreement (MOA). The mutually agreed to procedures discussed in paragraph (b) of the clause entitled "Over and Above Work" (DEC 1991) (DFARS 252.217-7028) are addressed in paragraph (d) below. In addition, the following shall also apply for that work authorized to proceed prior to negotiating a price:

(i) Within ten days after the Contractor receives notification to proceed with performance for which a price has not been negotiated and the Contractor has not submitted a price proposal for purposes of negotiation, the Contractor shall submit to the Government a proposal.

(ii) The Contracting Officer may grant an extension of this period if the Contractor requests it within the ten day period.

(iii) If the circumstances permit it, the Contracting Officer may accept and negotiate a price proposal at any later time prior to final payment under the job order, except that the Contractor may not receive profit on a payment under a late request.

(c) Limitation of Government Liability.

(i) The limitation of Government liability, which shall be the maximum amount that the Government will be obligated to pay the Contractor for performance of the order until the order is

definitized, shall be that amount identified on the authorization for the contractor to proceed with performance. The Contractor is not authorized to make expenditures or incur obligations exceeding the limitation of Government liability set forth in the authorization. If such expenditures are made, or if such obligations are incurred, they will be at the Contractor's sole risk and expense. Further, the limitation of liability shall be the maximum Government liability if the order is terminated.

(ii) If at any time the Contractor believes that its expenditure under an undefinitized Over and Above Work Order authorization will exceed the limitation of Government liability, the Contractor shall so notify the Contracting Officer, in writing, and propose an appropriate increase in the limitation of Government liability of such authorization. Within five days of such notice, the Contracting Officer will either (i) notify the Contractor, in writing, of such an appropriate increase, or (ii) instruct the Contractor how and to what extent the work shall continue, provided however, that in no event shall the Contractor be obligated to proceed with work on an undefinitized authorization beyond the point where its costs incurred plus a reasonable profit thereon exceed the limitation of Government liability, and provided also that in no event shall the Government be obligated to pay the Contractor any amount in excess of the limitation of Government liability specified in any such order prior to establishment of firm prices.

(d) Over and Above Work Procedures: The following administrative procedures for implementing these provisions apply.

1. The Contractor will identify needed repairs and recommend corrective action during contract performance for those deficiencies discovered which are not covered by the basic contract or subsequent contract modifications (supplemental agreements). Needed repairs and corrective action to be considered under this provision will be submitted to the Government in the form of an Inspection Deficiency Report (IDR).

2. As a minimum, the IDR will include the following:

- (a) Identify contract number;
- (b) Serialized by IDR number;
- (c) Identification of the applicable Work Item number;
- (d) Description of the discrepancy not covered by the basic contract or subsequent contract modifications;
- (e) Specific location of the discrepancy;
- (f) Recommendation for corrective action;
- (g) Estimate of the direct labor hours (to include any administrative time in direct support of the contract (i.e., allocable), overtime, double time, delay and disruption

hours, etc.), subcontractor costs and material costs required to correct the discrepancy. This information is to be submitted as an attachment to the IDR.

(h) If sufficient information is available, attach a detailed Change Order Price Analysis (COPA), in sufficient detail with which to negotiate a firm-fixed-price (FFP) contract modification, in lieu of estimates;

(i) Annotate the IDR to indicate whether the attached price information represents a COPA (to be negotiated) or estimates; and

(j) Identify any related changes, if any, to the contract delivery schedule (to include internal milestone dates) located in standard work item 042-01-001, Scheduling, Progressing, Material Status and Associated Reports. If none, so state.

Any IDR submitted to the Government which does not include the above data will be returned to the Contractor (as incomplete) for resubmission.

3. Required work will not be "split" into several IDRs to avoid any given dollar threshold (audit requirement, technical advisory report, etc.).

4. To the maximum extent possible, all efforts will be made to negotiate a FFP contract modification prior to the start of work. Negotiations will be conducted in accordance with established procedures.

5. The Administrative Contracting Officer (ACO) will initial all IDR responses which authorize the Contractor to proceed with corrective action prior to the price being negotiated. In addition, the authorization will include a dollar amount which represents the limitation of Government liability. Written authorization to proceed, which includes the limitation of Government liability, must be received by the Contractor from the ACO before performance.

6. Upon receipt of an IDR response initialed by the ACO but not yet negotiated, the Contractor shall diligently proceed with performance. The Contractor shall also prepare a detailed COPA for submission to the ACO within ten working days. The Contractor further agrees that the total proposed price of the COPA will not exceed the estimate submitted with the IDR.

7. All work authorized and performed as a result of this tasking will be funded under CLIN 0004 through 0006 in Section B of the contract. No invoices will be submitted against CLINs 0004 through 0006 and CLINs 0004 through 0006 will not be incorporated into the Work in Progress Report (WKP 500) for

purpose of calculating percentage of work completed. The WKP 500 will always show zero (0) progress for the over and above work CLIN. Work request proposals will be negotiated and definitized by use of a Standard Form (SF) 30. This SF 30 will transfer funding from (decrease) CLINs 0004 through 0006 to (increase) an appropriate CLIN for that work item. Provisions of DFARS 252.217-7007, Payments (DEC 1991), will then apply for invoicing.

8. The COPA will be negotiated using established procedures. Failure to agree upon a reasonable price shall be considered a question of fact subject to the "DISPUTES" clause of the contract.

9. Following negotiation of the COPA and preparation of the contract modification (SF 30), the Government shall update the Work in Progress Report (WKP 500) to reflect actual work performed as of the negotiation settlement date.

10. The Contractor shall segregate and track costs in accordance with the Change Order Accounting provisions of the contract. Any work authorized to proceed prior to reaching agreement on a negotiated price, or which is not negotiated prior to completion of performance, will be negotiated based on actual costs incurred ("booked costs" for the modification being negotiated). Actual incurred costs submitted by the Contractor will be subject to review and verification (as determined by the ACO) by the Defense Contract Audit Agency (DCAA).

11. At the end of contract performance and after all Over and Above Work has been definitized, a bilateral SF 30 will be prepared and executed deobligating unused funding on the CLINs.

Source: [Ref. 15:8-11]

APPENDIX H. SUPSHIP SAN DIEGO "OVER AND ABOVE WORK" TEST RESULTS

	ELLIOT (SRA)	COPELAND (SRA)	RENTZ (DSRA)
Ratio IDRs:Mods	3.9:1	5.7:1	7.4:1
No. Mods Issued	72	57	91
Avg. no. days from IDR receipt to negotiated modification	2.5	12.3	14.9

All three ships were in FFP availabilities at SWM during same period.

Source: [Ref. 17]

LIST OF REFERENCES

1. Arkhon Corporation, "Delay, Disruption and Acceleration," A Program on Contracts Management, Claims Avoidance and Resolution, January 1992.
2. Brandt, Jeff S., "Use of Over and Above Work Clause in Job Orders Awarded Under an MSRA/ABR," NAVSEA 028 letter, serial no. 0281/361, 31 December 1992.
3. Department of Defense, "Subpart 217.77--Over and Above Work," DFARS, 1991.
4. Department of Defense, "Clause 252.217-7003, Changes," DFARS, 1991.
5. Department of Defense, "Clause 252.217-7028, Over and Above Work," DFARS, 1991.
6. Department of Defense, Office of the Assistant Inspector General for Auditing, Logistics Support Directorate, "Report on the Audit of Control of Over and Above Work for Contract Depot Maintenance," Draft Audit Report, 1992.
7. Dykeman, C. J., "Solicitation Inquiry Regarding Over and Above Work Clause Inserted in Solicitation N62791-94-B-0018 For the USS ELLIOT (DD-967) FY-94 SRA," National Steel and Shipbuilding Company (NASSCO) letter, rc/9383/WTW/CJD/rr, 7 December 1993.
8. Fonte, Dominick J., "Report on Over and Above Provisions, USS ELLIOT (DD-967), 94-C-0018," SUPSHIP San Diego memo, 28 April 1994.
9. General Accounting Office, "Costs to Overhaul Navy Ships at Private Shipyards," Report to the Chairman, Committee on Appropriations, U.S. Senate, January 1986.
10. General Accounting Office, "Cost Growth and Schedule Overrun Problems Continue at the Shipyards," Report to the Chairman, Committee on Armed Services, House of Representatives, July 1990.
11. Howe, Rocky, "Over and Above Provision, USS ELLIOT (DD-967), 94-C-0018," SUPSHIP San Diego memo, 5 May 1994.
12. McKay, Robert A., "USS ELLIOT (DD-967), Contract No. N62791-94-C-0018 Section C-28, Over and Above Work Clause," SWM letter, serial no. EL/DP-001, 9 May 1994.

13. Reilly, Michael A., "Over and Above Work Requirements," SUPSHIP San Diego OGC memo, 17 March 1993.
14. Roche, J. J., "MSC Comments on DFARS Part 217," MSC letter, serial N105/001454, 21 March 1991.
15. SUPSHIP San Diego, "Contract Number N62791-94-C-0018 dated 21 January 1994."
16. SUPSHIP San Diego, "Internal SUPSHIP Over and Above Work Procedures."
17. SUPSHIP San Diego, "Over and Above Work Test Results," 13 April 1994.
18. SUPSHIP San Diego, "FY 1985 to FY 1994 Government Estimate, Contract Award Price, Final Contract Cost, and Growth Work Data For Selected CNO Availabilities."
19. Wight, CDR Terry E., "Ship Repair Over and Above Work Point Paper," SUPSHIP San Diego letter, serial no. 400/0279, 24 February 1992.
20. Wight, CDR Terry E., "DFARS Part 217 Special Contracting Methods," SUPSHIP San Diego briefing given to NAVSEA SUPSHIP ACO Conference in Monterey, CA, April 1992.
21. Wight, CDR Terry E., "Draft DOD IG Audit Report on Control of Over and Above Work For Contract Depot Maintenance (Project No. 1LB-0049)," SUPSHIP San Diego letter, serial no. 400/0965, 6 May 1992.
22. Wight, CDR Terry E., SUPSHIP San Diego letter, serial no. 400/00541, 2 April 1993.
23. Wight, CDR Terry E., SUPSHIP San Diego letter, serial no. 400/01093, 14 July 1993.
24. Wight, CDR Terry E., SUPSHIP San Diego letter, serial no. 400/01601, 25 October 1993.
25. Wight, CDR Terry E., "Solicitation Inquiry Response," SUPSHIP San Diego findings, 21 December 1993.

INITIAL DISTRIBUTION LIST

- | | |
|---|---|
| 1. Defense Technical Information Center
Cameron Station
Alexandria, VA 22304-6145 | 2 |
| 2. Library, Code 52
Naval Postgraduate School
Monterey, CA 93943-5101 | 2 |
| 3. Professor David V. Lamm, SM/Lt
Naval Postgraduate School
Monterey, CA 93943-5000 | 5 |
| 4. Professor Mark W. Stone, SM/St
Naval Postgraduate School
Monterey, CA 93943-5000 | 1 |
| 5. CDR Rebecca J. Adams, SM/Ad
Naval Postgraduate School
Monterey, CA 93943-5000 | 1 |
| 6. Defense Logistics Studies Information Exchange
U.S. Army Logistics Management Center
Fort Lee, VA 23801 | 1 |
| 7. CDR Terry E. Wight, Code 400
Supervisor of Shipbuilding,
Conversion and Repair, USN
Box 368119
3600 Surface Navy Blvd.
San Diego, CA 92136-5066 | 1 |
| 8. CAPT Ronald W. Hickman, Code 028
Naval Sea Systems Command
Washington, DC 20362-3101 | 1 |
| 9. LT Duane J. Schatz
708 5th ST NW
Mandan, ND 58554 | 1 |